Form 3160-3 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: July 31, 2010

			Expir	es:	July	3
7	0000	Coriol 1	No			

UTU-000577A								
ć	tf Indian	Allattas	on Tribo	Man				

							0 00007711		
	APPLICATION FOR PERMIT TO D	RILL OR	REENT	TER		ì	ian, Allottee or Tribe l Tribe	Name	
1a.	Type of Work: X DRILL	REENTER					it or CA Agreement, N	lame and	No.
1 h	Type of Well: Oil Well X Gas Well Other	Sin	gle Zone	X Multiple Z	one		Name and Well No. deral 920-23P		
2.	Name of Operator		B10	Lat Manuel and		9. API V			
	Kerr-McGee Oil & Gas Onsi	hore, LP					43-047-40		
3a.		3b. Phone N	•	•		10. Field	and Pool, or Explorate	ory	
	PO Box 173779 Denver, CO 80217-3779			een White 929-6666		Na	tural Buttes Field		
4.	Location of well (Report location clearly and In accordance with a	uny State requ				11. Sec.,7	Γ.,R.,M.,or Blk.an	d Sur	vey or Are
	At surface 840' FSL 501' FEL SE/4 SE/4 Lat. At proposed prod. zone 617339 x 443 0199 y 5	40.015 40.615		Long109.62		23	T 9S R 20E	3	S.L.B. & M.
14.	Distance in miles and direction from the nearest town or post office	*				12. Coun	ty or Parish	13.	State
	Approximately 41 miles south of Vernal, Utah						Uintah		Utah
15.	Distance from proposed* location to nearest 840' property or lease line, ft.	16.		res in lease 091.18		cing Unit d	ledicated to this well	<u> </u>	
	(Also to nearest drlg. unit line, if any)							 	
18.	Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19.	Proposed 10	Depth 0,400'	1	M/BIA Bo VYB00029	nd No. on file 1		
21.	Elevations (Show whether DF. RT, GR, etc.)	22.	Aproxima	ate date work will s	start*	23.	Estimated duration		
	4,851 ' GR	КВ	ASAP				10 days		
			24. Attachi	ments					
The	following, completed in accordance with the requirements of Onsho	ore Oil and G	as Order N	lo. 1 shall be attach	ned to this	form:			
2. 3.	Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System Language Supposed Suppose	ands, the	5. C 6. S	tem 20 above). Operator certification	on.		ored by existing bond of		
	Signature Kallen White	Name (Prin	ted/ Typed)		Raleen W		Date 2-13-		0 9 7
Titl	Sr Regulatory Analyst			E-mail: Phone:		rale	en.white@anadarko 720-929-6666	.com	
	hoved By (Signature)	Name (Print BR)	ADLE	YG. HILL			Date 02-7	4-0	9
Γitle	, The	Office NVII	RONMEN	ITAL MANAGEI	R				· .

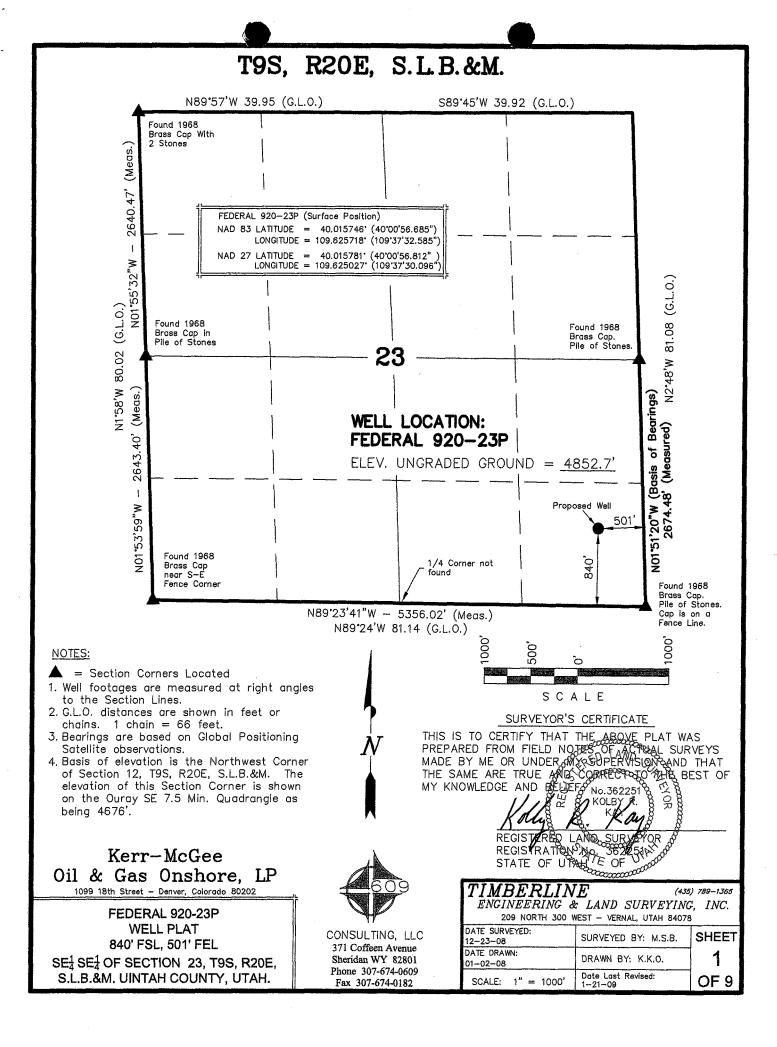
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* (Instructions on page 2)

FEB 17 2009



Federal 920-23P SESE Sec. 23, T9S,R20E UINTAH COUNTY, UTAH UTU-000577A

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1.-2. Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	Resource
Uinta	0 - Surface	
Green River	1,681'	•
Birds Nest	1,923'	Water
Mahogany	2,430'	Water
Wasatch	5,034'	Gas
Mesaverde	8,234'	Gas
MVU2	9,129'	Gas
MVL1	9,539'	Gas
TD	10 400'	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program.

4. Proposed Casing & Cementing Program:

Please refer to the attached Drilling Program.

5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program.

6. <u>Evaluation Program</u>:

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 10,400° TD, approximately equals 6,641 psi (calculated at 0.64 psi/foot).

Maximum anticipated surface pressure equals approximately 4,353 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements:
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

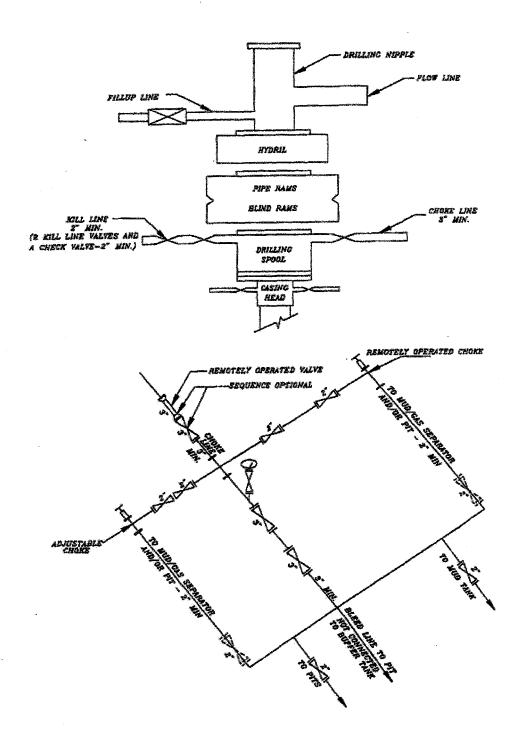
Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please refer to the attached Drilling Program.

EXHIBIT A Federal 920-23P



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

Federal 920-23P SESE Sec. 23 T9S R20E UINTAH COUNTY, UTAH UTU-000577A

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. Existing Roads:

Refer to the attached location directions.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. Planned Access Roads:

Approximately ±3,150' of new access road is proposed. Refer to Topo Map B.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

3. <u>Location of Existing Wells Within a 1-Mile Radius:</u>

Please refer to Topo Map C.

4. <u>Location of Existing & Proposed Facilities:</u>

Please see the Natural Buttes Unit SOP.

Refer to Topo Map D for the location of the proposed pipelines.

Variances to Best Management Practices (BMPs) Requested:

This exception to the BMP should be granted by the BLM Authorized Officer because indurated bedrock, such as sandstone, is at or within 2 feet of the surface and the soil has a poor history for successful rehabilitation.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Shadow gray (2.5Y 6/2), a non-reflective earthtone.

Interim Surface Reclamation Plan:

This exception is requested due to the current twin and multi-well program. If determined that this well will not be a candidate for either twinning &/or multi-well the operator shall spread the topsoil pile on the location up to the rig anchor points. The location will be reshaped to the original contour to the extent possible. The operator will reseed the area using the BLM recommended seed mixture and reclamation methods.

5. <u>Location and Type of Water Supply:</u>

Please see the Natural Buttes SOP.

6. Source of Construction Materials:

Please see the Natural Buttes SOP.

7. Methods of Handling Waste Materials:

Please see the Natural Buttes SOP.

A plastic reinforced liner is to be used as discussed during on-site inspection. It will be a minimum of 20 mil thick and felt, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E, Pipeline Facility Sec. 36, T9S, R20E, Goat Pasture Evaporation Pond SW/4 Sec. 16, T10S, R22E, Bonanza Evaporation Pond Sec. 2, T10S, R23E (Request is in lieu of filing Form 3160-5, after initial production).

8. Ancillary Facilities:

Please see the Natural Buttes SOP.

9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be resurveyed and a form 3160-5 will be submitted.

10. Plans for Reclamation of the Surface:

Please see the Natural Buttes SOP.

Operator shall call the BIA for the seed mixture when the final reclamation occurs.

11. Surface/Mineral Ownership:

The well pad and access road are located on lands owned by:

Ute Indian Tribe P.O. Box 70 Fort Duchesne, Utah 84026 (435) 722-5141

The mineral ownership is listed below:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

12. <u>Stipulations/Notices/Mitigation:</u>

There are no stipulations or notices for this location.

13. Other Information:

A Class III archaeological survey and Paleo survey has been performed and will be submitted upon receipt.

14. Lessee's or Operator's Representative & Certification:

Raleen White Sr. Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP P.O. Box 173779 Denver, CO 80217-3779 (720) 929-6666 Tommy Thompson Drilling Manager Kerr-McGee Oil & Gas Onshore LP P.O. Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under the terms and conditions of the lease for the operations conducted upon leased lands.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

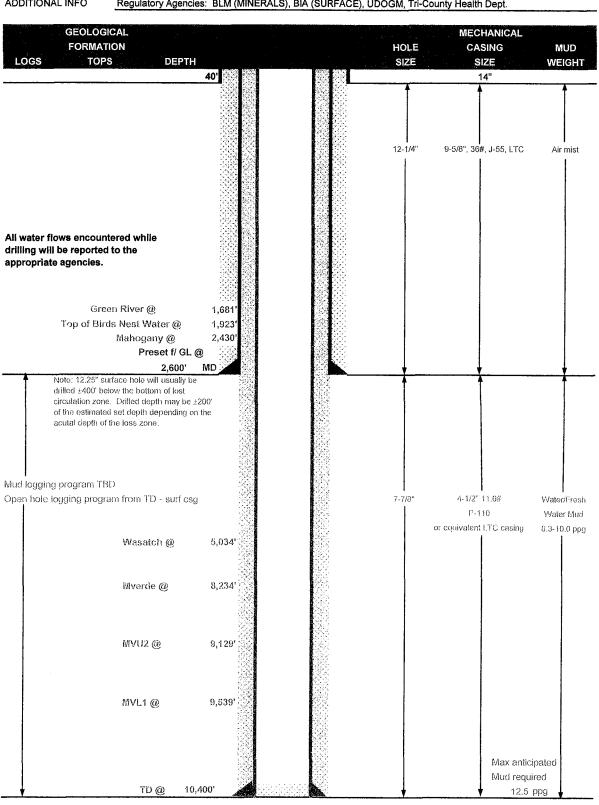
2/13/2009

Date



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME K	RR-McGEE O	IL & GAS ONSHORE LP	DATE	February	9, 2009		
WELL NAME F	ederal 920-	23P	TD	10,400'	MD/TVD		
FIELD Natural Bu	ttes	COUNTY Uintah	STATE Utah	ELEVATION	4,851' GL	KE	3 4,866'
SURFACE LOCATION	SE/4 SE/4	840' FSL 501' FEL	Sec 23 T 9S	R 20E		BHL	Straight Hole
	Latitude:	40.015746 Longitu	ide: -109.625718		NAD 83		
OBJECTIVE ZONE(S)	Wasatch/M	lesaverde					
ADDITIONAL INFO	Regulatory	Agencies: BLM (MINERA	LS), BIA (SURFACE),	UDOGM, Tri-	County Health De	pt.	





KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

								DESIGN FACTORS		
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	-	0-40'							
]						3,520	2,020	453,000
SURFACE	9-5/8"	0	to	2600	36.00	J-55	LTC	0.79	1.66	6.16
		•]				10.690	7,580	279,000
PRODUCTION	4-1/2"	0	to	10400	11.60	P-110	LTC	2.39	1.12	2.65
									[
		<u> </u>								

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD =

12.5 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 4,353 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD =

12.5 ppg)

0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MABHP 6,641 psi

CEMENT PROGRAM

	ĺ	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1			+ .25 pps flocele	Ì :			
	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt	50		15.60	1.18
			+ 2% CaCl + .25 pps flocele				
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE			NOTE: If well will circulate water to su	rface, opti	on 2 will be	utilized	
Option 2	LEAD	1500	Prem cmt + 16% Gel + 10 pps gilsonite	170	35%	11.00	3.82
	j		+.25 pps Flocele + 3% salt BWOC				
TAIL		500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ .25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
DDDBUARD	N	4.520	December 1 its II + 20/ KCL + 0.05	500		44.00	
PRODUCTIO	N LEAD	4,530'	Premium Lite II + 3% KCI + 0.25 pps	500	60%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel			ĺ	
			+ 0.5% extender				
TAIL		5.870'	50/50 Poz/G + 10% salt + 2% gel	1640	60%	14.30	1.31
	True.	5.57 0	+.1% R-3	10/40	007e	14,30	1.31

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SU	R	FA	C	E
SU	R	FP	чC	E

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.

PRODUCTION

Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip.

Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.
Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING	ENGINEER
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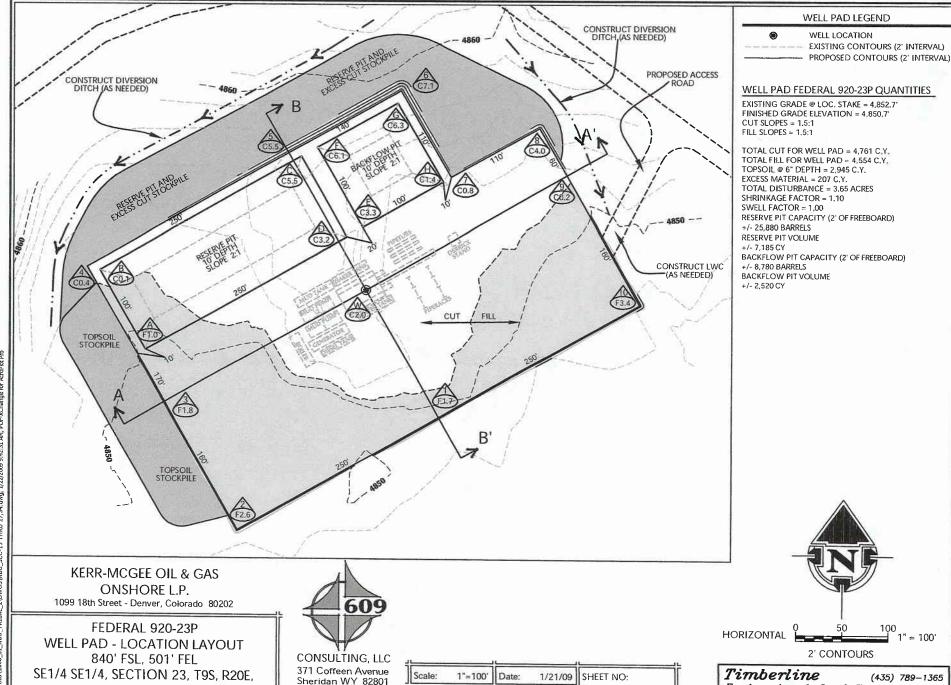
	DATE:	
John Huycke / Grant Schluender		

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained



Phone 307-674-0609

REVISED:

DATE

2 OF 9

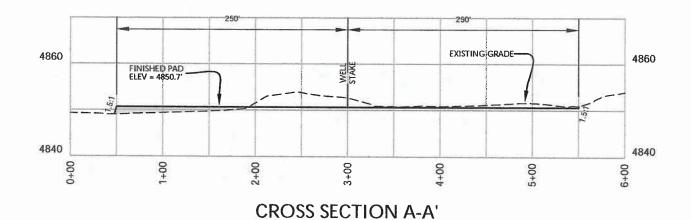
Fax 307-674-0182

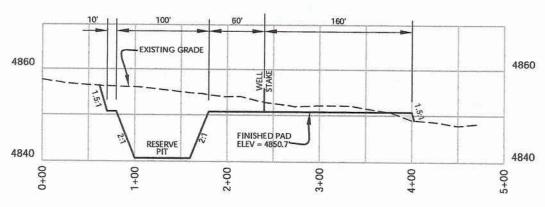
Engineering & Land Surveying, Inc.

VERNAL, UTAH 84078

38 WEST 100 NORTH

S.L.B.&M., UINTAH COUNTY, UTAH





CROSS SECTION B-B'

NOTE: CROSS SECTION B-B' DEPICTS
MAXIMUM RESERVE PIT DEPTH.

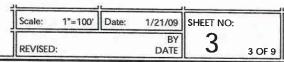
KERR-MCGEE OIL & GAS ONSHORE L.P.

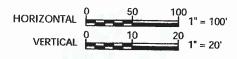
1099 18th Street - Denver, Colorado 80202

FEDERAL 920-23P
WELL PAD - CROSS SECTIONS
840' FSL, 501' FEL
SE1/4 SE1/4, SECTION 23, T.9S., R.20E.
S.L.B.&M., UINTAH COUNTY, UTAH









Timberline (435) 789-1365 Engineering & Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078



PHOTO VIEW: FROM PIT CORNER D TO L'OCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY

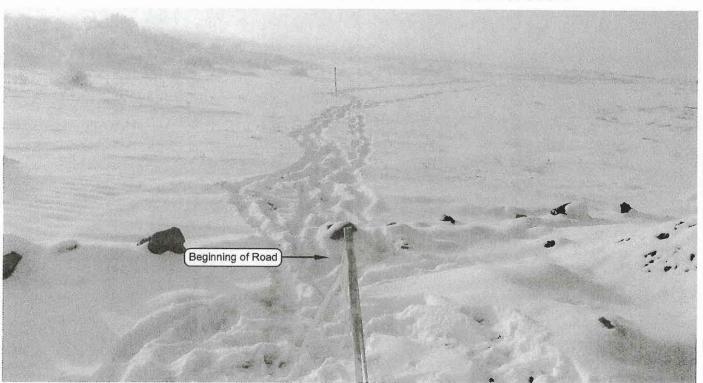


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHWESTERLY

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

FEDERAL 920-23P 840' FSL, 501' FEL $SE_{4}^{1}SE_{4}^{1}$ OF SECTION 23, T9S, R20E, S.L.B.&M. UINTAH COUNTY, UTAH.



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

DATE TAKEN: 12-23-08 DATE DRAWN: 01-02-09

TAKEN BY: M.S.B.

DRAWN BY: K.K.O.

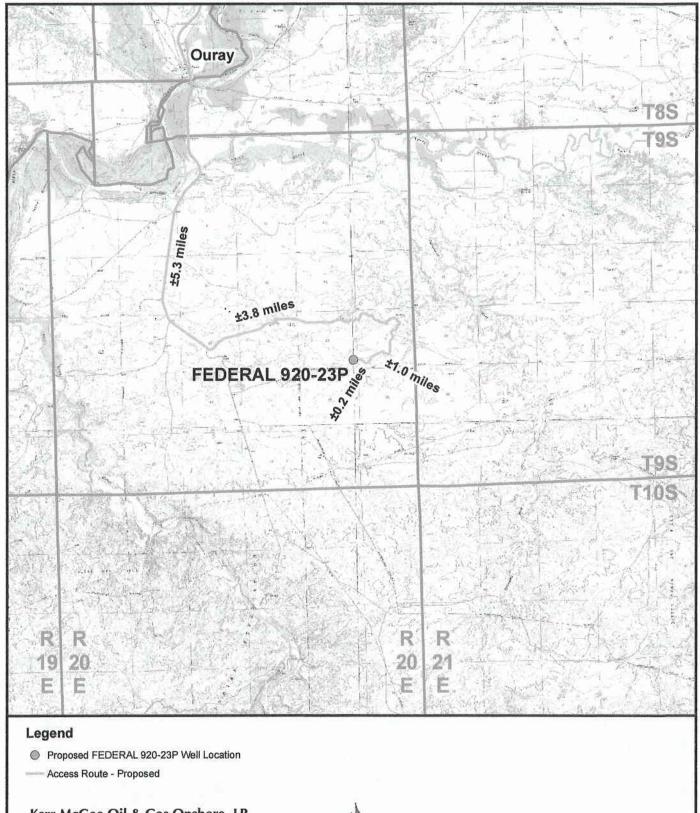
REVISED:

Timberline

209 NORTH 300 WEST

(435) 789-1365 Engineering & Land Surveying, Inc. VERNAL, UTAH 84078

SHEET 4 OF9



Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street, Denver, Colorado 80202

FEDERAL 920-23P Topo A 840' FSL, 501' FEL SE'4 SE'4, Section 23, T9S, R20E S.L.B.&M., Uintah County, Utah

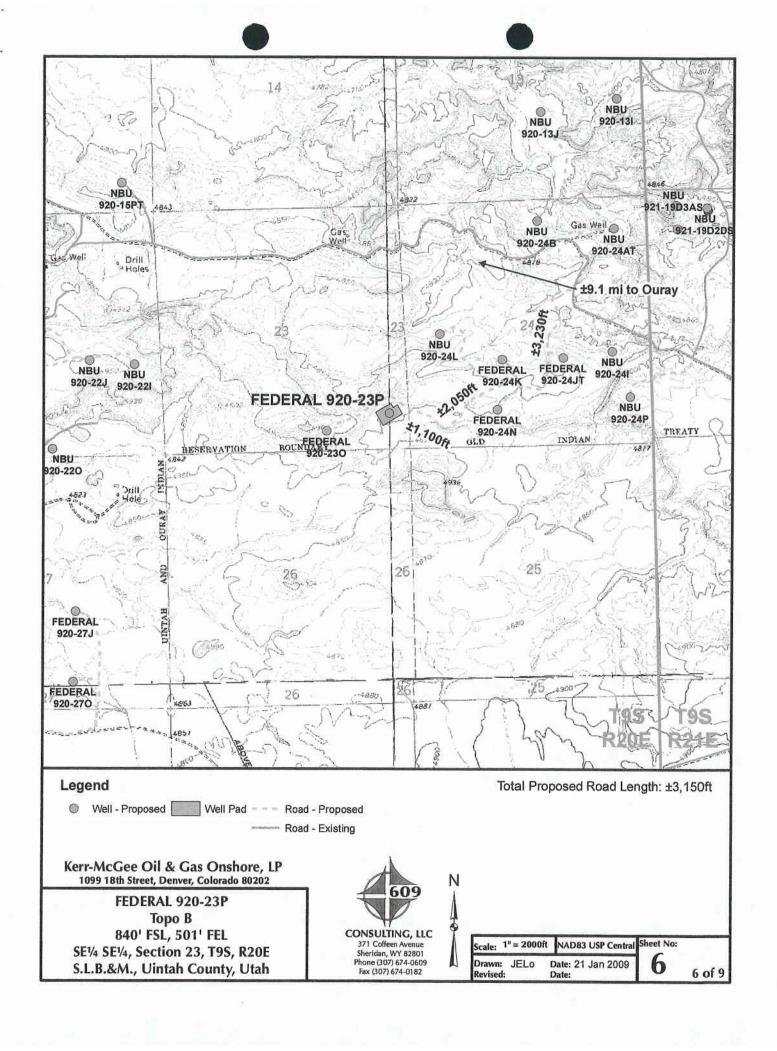


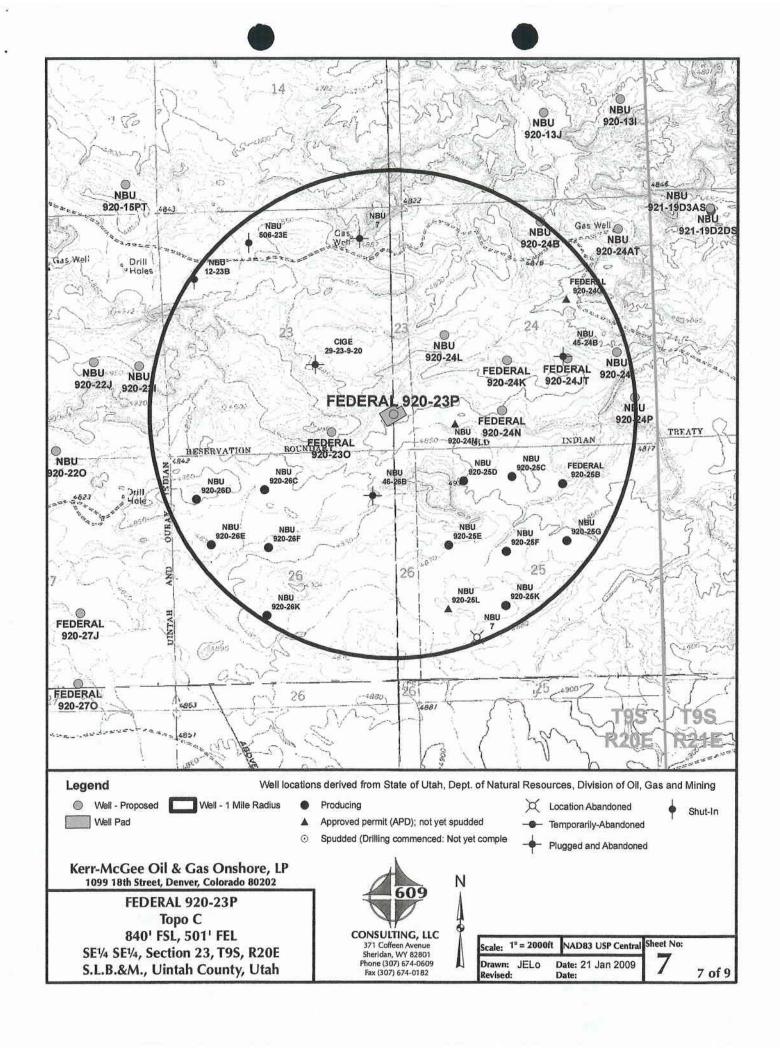
CONSULTING, LLC 371 Coffeen Avenue Sheridan, WY 82801 Phone (307) 674-0609 Fax (307) 674-0182

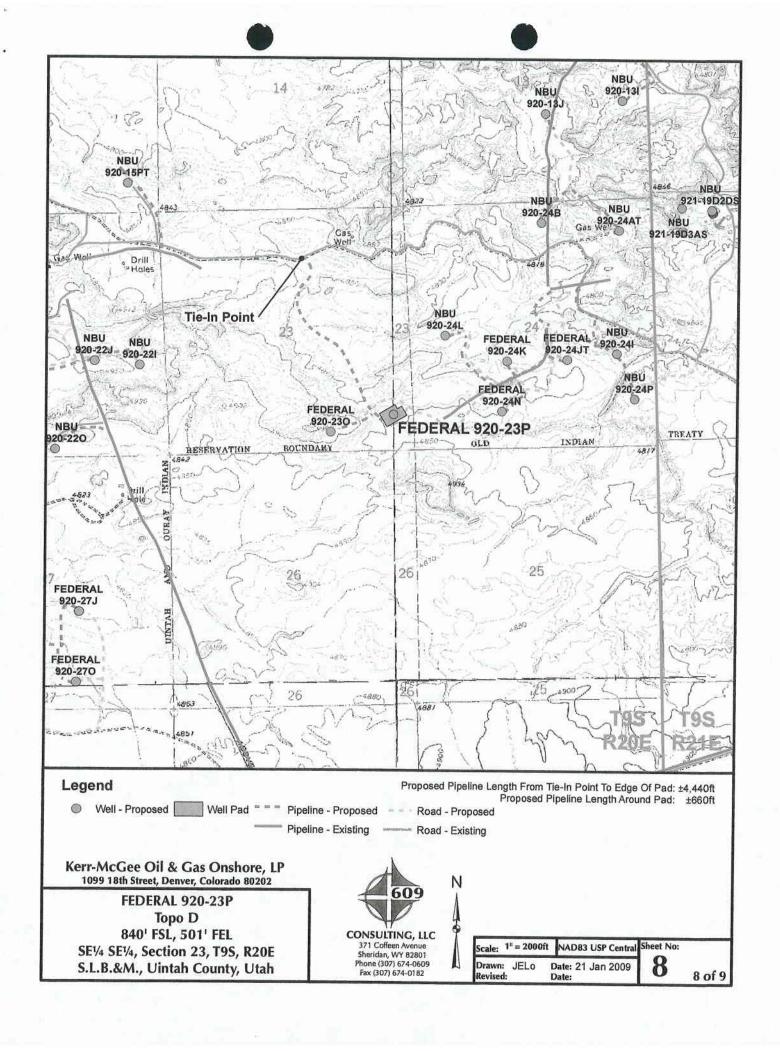
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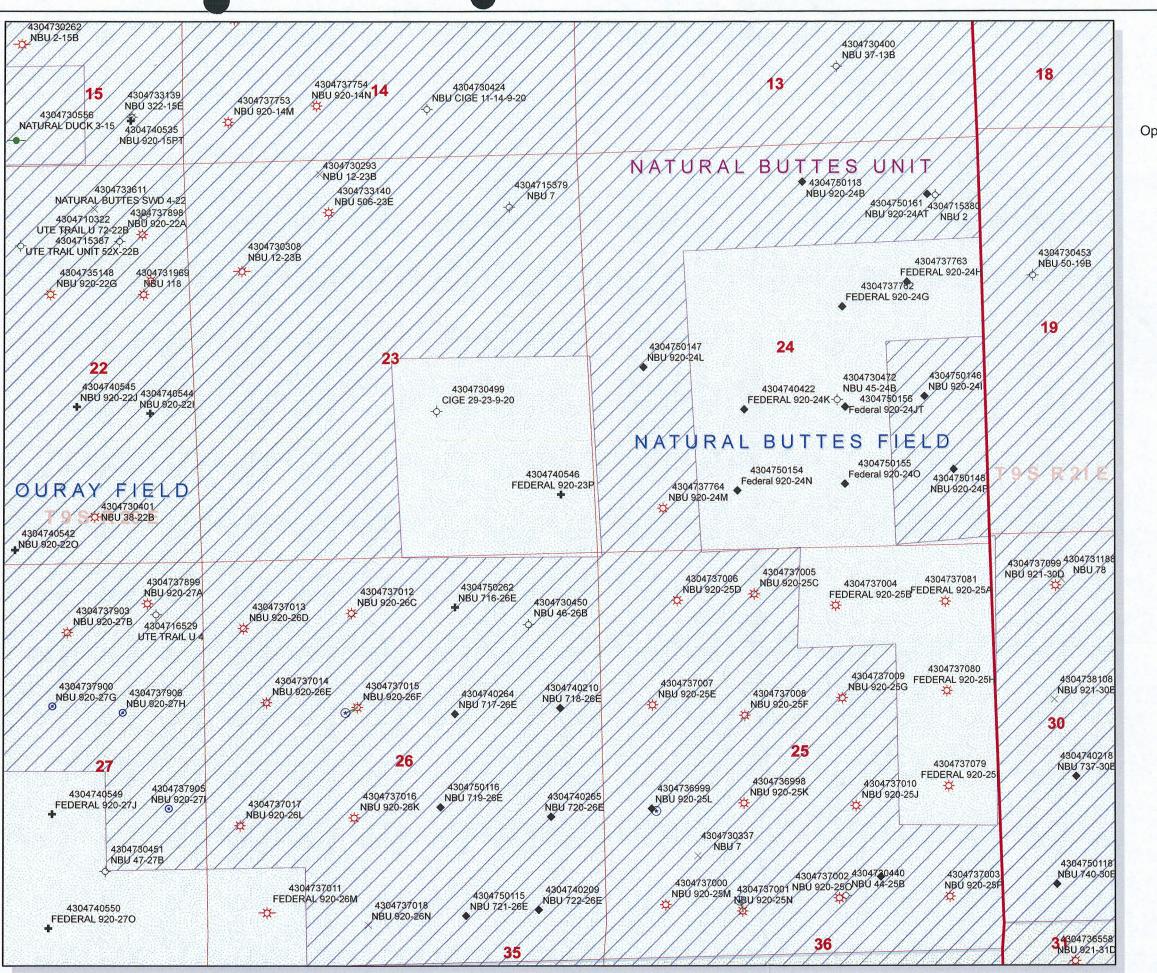


Kerr-McGee Oil & Gas Onshore, LP FEDERAL 920-23P Section 23, T9S, R20E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 5.3 MILES TO THE INTERSECTION OF A SERVICE ROAD TO THE NORTHEAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY, THEN EASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 3.8 MILES TO A SECOND SERVICE ROAD TO THE SOUTHWEST. EXIT LEFT AND PROCEED IN A SOUTHWESTERLY DIRECTION ALONG THE SECOND SERVICE ROAD APPROXIMATELY 1.0 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION APPROXIMATELY 1,100 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 41.0 MILES IN A SOUTHERLY DIRECTION.

APD RECEIVED: 02/17/2009		API NO. ASSIG	NED: 43-047	7-40546	
WELL NAME: FEDERAL 920-23P					
OPERATOR: KERR-MCGEE OIL & GAS (N2995)	P.	HONE NUMBER:	720-929-666	6	
CONTACT: RALEEN WHITE					
PROPOSED LOCATION:	Ī	NSPECT LOCATN	BY: /	/	
SESE 23 090S 200E		Tech Review	Initials	Date	
SURFACE: 0840 FSL 0501 FEL	1	rech keview	Iniciais		
BOTTOM: 0840 FSL 0501 FEL	E	Engineering			
COUNTY: UINTAH		Geology			
LATITUDE: 40.01574 LONGITUDE: -109.62510 UTM SURF EASTINGS: 617339 NORTHINGS: 44301	99	Surface			
FIELD NAME: NATURAL BUTTES (630	L				
LEASE TYPE: 1 - Federal LEASE NUMBER: UTU-000577A SURFACE OWNER: 2 - Indian		ROPOSED FORMAT		VD	
RECEIVED AND/OR REVIEWED:	LOCATION	N AND SITING:			
Plat	R64	19-2-3.			
Bond: Fed[1] Ind[] Sta[] Fee[]	Unit:				
(No. WYB000291)		19-3-2. Gener	2]		
Potash (Y/N) Oil Shale 190-5 (B) or 190-3 or 190-13		ting: 460 From Qt		etween Wells	
Water Permit	R649-3-3. Exception				
(No. 43-8496)	Dra	illing Unit			
RDCC Review (Y/N)		pard Cause No:			
(Date:)	Ef	ff Date:			
NIA Fee Surf Agreement (Y/N)	Si	iting:			
Intent to Commingle (Y/N)	R64	49-3-11. Dire	ctional Dri	1.1	
COMMENTS: Sop, Separat	- Du			· ·	
			<u> </u>		
stipulations: 1- Leden Appro	ova				
5-01C SH	WE				



API Number: 4304740546

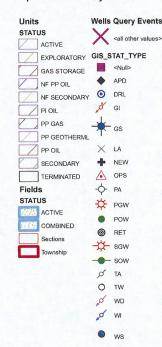
Well Name: FEDERAL 920-23P

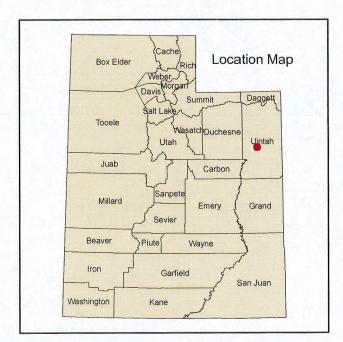
Township 09.0 S Range 20.0 E Section 23

Meridian: SLBM

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared: Map Produced by Diana Mason









State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

February 24, 2009

Kerr-McGee Oil & Gas Onshore, LP P O Box 173779 Denver, CO 80217-3779

Re:

Federal 920-23P Well, 840' FSL, 501' FEL, SE SE, Sec. 23, T. 9 South, R. 20 East,

Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-40546.

Sincerely,

Gil Hunt

Associate Director

pab Enclosures

cc:

Uintah County Assessor

Bureau of Land Management, Vernal Office



Operator:	Kerr-M	<u> [cGee Oil & Gas Onshore, LP</u>)
Well Name & Number	Federal	920-23P	
API Number:	43-047	-40546	
Lease:	UTU-0	00577A	
Location: SE SE	Sec. 23	T. _9 South_	R. _20 East

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division with 24 hours of spudding the well.

• Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

• Contact Dustin Doucet at (801) 538-5281 office (801) 733-0983 home

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.
- 5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

Page 2 43-047-40546 February 24, 2009

6. In accordance with Order in Cause No. 190-5(b) dated October 28, 1982, the Operator shall comply with requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operator shall ensure that the surface and/or production casing is properly cemented over the entire oil shale interval as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the Division.

(August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

	Total a	.) See	2000	j	ر شر	i j	

OME IN	O. 10	JU-4-	0137
Expires:	July	31,	2010

<u>5.</u>	Lease	Serial	Nο
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Ute	Trib	e

				Old Linds	
				7. If Unit or CA Agreement, Name and No.	
la.	Type of Work: X DRILL REEN	TER	1.		
				8. Lease Name and Well No.	
lb.	Type of Well: Oil Well X Gas Well Other	Single Zone X Multiple Zo	one	Federal 920-23P	
2.	Name of Operator	•		9. API Well No.	
	Kerr-McGee Oil & Gas Onshore, L	P		43 047 40546	
3a.		hone No. (include area code)		10. Field and Pool, or Exploratory	
	PO Box 173779	Raleen White		Natural Buttes Field	,
-,	Denver, CO 80217-3779	720-929-6666			
4.	Location of well (Report location clearly and In accordance with any Sta	te requirements.*) NAD 83		11. Sec., T., R., M., or Blk. and Survey or	Area
	At surface 840' FSL 501' FEL SE/4 SE/4 Lat. 4	40.015746 Long109.62	25718		
	At proposed prod. zone	•		23 T 9S R 20E S.L.B. &	M.
	At proposed prod. zone				
14.	Distance in miles and direction from the nearest town or post office*			12. County or Parish 13. State	
	Approximately 41 miles south of Vernal, Utah			Uintah Utah	
15.	Distance from proposed*	16. No. of acres in lease	17. Spa	cing Unit dedicated to this well	
	location to nearest				
	property or lease line, ft.	2,091.18	4	0 acres	
10	(Also to nearest drlg. unit line, if any)		100 511		
18.	Distance from proposed location* to nearest well, drilling, completed. ±1,300'	19. Proposed Depth	20. BLI	M/ BIA Bond No. on file	
	to nearest well, drilling, completed, ±1,300' applied for, on this lease, ft.	10,400'		VYB000291	
21.	Elevations (Show whether DF. RT, GR, etc.)	22. Aproximate date work will s	 start*	23. Estimated duration	
	4,851 ' GR KB	ASAP		10 days	
	mental and an artistic and a second	24. Attachments	 _		
The	following, completed in accordance with the requirements of Onshore Oil	and Gas Order No. I shall be attack	hed to this	form	
	5, , , , , , , , , , , , , , , , , , ,			ware took	

- 1. Well plat certified by a registered surveyor.
- 2. A Drilling Plan.
- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- 4. Bond to cover the operations unless covered by existing bond on file(see item 20 above).
- 5. Operator certification.
- 6. Such other site specific information and/ or plans as may be required by the a

	authorized officer.	
Es Signature Kallen White	Name (Printedi Typed) Raleen White Date 2-13-2009	
Title Sr Regulatory Analyst	E-mail: raleen.white@anadarko.com Phone: 720-929-6666	
Approved By (Signature)	Name (Printed Typed) Stephanie Thrward Date 11/23/09	
Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct

Conditions of approval, if any, are attached

Title 18 U.S.C. Section 1001 and Title 43 make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or r as as to any matter within its jurisdiction.

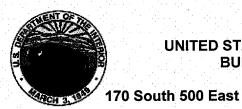
* (Instructions on page 2)



NOV 3 0 2009

DIV. OF OIL, GAS & MINING NOTICE OF APPROVAL

NOS ap posted 2/18 AFMSS# 095XS0705A



UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:

Kerr McGee Oil & Gas Onshore, LP

Location:

SESE, Sec. 23, T9S, R20E

Well No: API No:

Federal 920-23P 43-047-40546

Lease No:

UTU-0577A

Agreement:

N/A

OFFICE NUMBER:

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

NOTIFICATION REQUIREMENTS

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <u>ut_vn_opreport@blm.gov</u> .
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 9 Well: Federal 920-23P 11/17/2009

SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

Site-Specific Conditions of Approval:

- 1. Paint facilities "shadow gray."
- 2. Construct diversion drainages around well pad.
- 3. Monitor location by a permitted archaeologist during the construction process.
- 4. Monitor by a permitted paleontologist during construction.
- 5. If project construction operations are scheduled to occur after December 31, 2009, a raptor survey shall be conducted prior to construction of the proposed locations, pipelines, or access roads if construction will take place during raptor nesting season (January 1 through September 30).
- 6. If construction will occur in 2009, avoid an active burrowing owl nest with a ¼-mile buffer between March 1 and August 31. No avoidance buffer is recommended for inactive nests or for construction activities conducted outside of these dates.
- 7. If project construction operation are scheduled to occur after June 15, 2010, KMG will conduct additional biological surveys in accordance with the guidelines specified I the USFWS Rare Plant Conservation Measures for Uinta Basin hookless cactus (See Appendix D) and conduct its operation according to its specifications.

BIA Standard Conditions of Approval:

- 1. Soil erosion will be mitigated by reseeding all disturbed areas.
- 2. The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.
- 3. An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations of this document and in the Application for Permit to Drill. A closed drilling system shall be sued in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe Technician, BIA, and other agencies involved.
- 4. The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.
- 5. A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- 6. Major low water crossings will be armored with pit run material to protect them from erosion.
- 7. All personnel shall refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.
- 8. If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

Page 3 of 9 Well: Federal 920-23P 11/17/2009

- 9. Before the site is abandoned the company will be required to restore the right-of-way to near its original state. The disturbed area will be reseeded with desirable perennial vegetation. If necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable seed mixture.
- 10. Noxious weeds will be controlled on all surface disturbances within the project area. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.
- 11. If project construction operations are scheduled to occur after December 31, 2009, KMG shall conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 (See Appendix E) and conduct its operations according to applicable seasonal restrictions and spatial offsets.
- 12. USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix E).
- 13. All personnel shall refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- 14. If artifacts or any culturally sensitive materials are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

Page 4 of 9 Well: Federal 920-23P 11/17/2009

DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- 1. Surface casing cement shall be brought up and into the surface. Top of Cmnt is to reach surf. For surface casing cement program, to reach surface with Top of Cement, operator is required to pump additional cement beyond the stated amounts in application.
- 2. The operator must notify any active gilsonite operation located within 2 miles of the location 48 hours prior to any surface blasting for this well.
- 3. Conductor casing shall be set into competent formation.

toc_1800_operDrlgPlan#4 CsgSurf_set_2600 to 2800 KerrMcGee apd coa Downhole

4. Production casing cement shall be brought up and into the surface casing. Production casing minimum cement top is 1800 ft. The minimum cement top is approximately 0700 ft above the surface casing shoe.

Cmnt Top (TOC) standard will place cmnt behind casing across formation lost circulation zone, Birds Nest Zone.

Surface casing setting depth stated in APD is 2700 to 2800 ft.

COA specification fulfills operators performance standard stated in APD (where operators toc is calc'd with an excess to reach surface).

- 5. Operator is to notify BLM Vernal Field Office and active gilsonite mining operator (or lease holder) located within a 2 mile radius, 48 hours prior to pad explosives blasting. Well is not close to gilsonite vein, but on trend to gilsonite vein deposits.
- 6. A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.
- 7. Drilling plan specifics and practices are referenced in the Kerr McGee Oil & Gas Standard Operating Procedures (SOP version: July 28, 2008). The operators drilling plan items 3 to 9 reference the SOP. Kerr McGee shall adhere to the referenced requirements in the SOP. Kerr McGee and their contractors shall adhere to all Oil and Gas rules and requirements listed in the Code of Federal Regulations and all Federal Onshore Oil and Gas Orders except where variances have been granted.
- 8. Covering air/gas drilling operations, requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.
- 9. A Gamma Ray well Log shall be run from the well Total Depth to the surface.

 A copy of the Gamma Ray well Log shall be submitted to the BLM Vernal Field Office.

Page 5 of 9 Well: Federal 920-23P 11/17/2009

10.A variance is granted for Onshore Order #2 Drilling Operations III. E. "Blooie line discharge 100 feet from well bore and securely anchored" Blooie line can be 45 feet.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the
 daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas
 Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be
 performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be
 reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from

Page 6 of 9 Well: Federal 920-23P 11/17/2009

KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the <u>top of cement</u> and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 7 of 9 Well: Federal 920-23P 11/17/2009

OPERATING REQUIREMENT REMINDERS:

• All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
 - Operator name, address, and telephone number.
 - o Well name and number.
 - o Well location (1/41/4, Sec., Twn, Rng, and P.M.).
 - O Date well was placed in a producing status (date of first production for which royalty will be paid).
 - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - O Unit agreement and/or participating area name and number, if applicable.
 - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

Page 8 of 9 Well: Federal 920-23P 11/17/2009

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.
- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

Page 9 of 9 Well: Federal 920-23P 11/17/2009

• Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Cor	npany: <u>K</u>	ERR-McGEE	OIL &	GAS ON	SHORE.	, L.P.	
Well Name	<u>. </u>	FEDERA	L <u>920-</u> 2	23P			
Api No:	43-047-40	546		Lease Ty	pe: <u>FED</u>	ERAL	
Section 23	_Township	09S Range	20E	County_	Ul	INTAH	
Drilling Cor	ntractor	PETE MART	ΓIN DI	RLG	_RIG #	BUCKET	
SPUDDE	D:						
	Date	01/09/2010					
	Time	11:00 AM					
	How	DRY	<u></u>				
Drilling wi	II Commer	nce:					
Reported by		JAME	S GOI	BER	<u></u>		
Telephone #_		(435)	<u>828-70</u>	24			
Date	01/11/2010	Signed_	C	HD			

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-000577A
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
	sals to drill new wells, significantly deeper ugged wells, or to drill horizontal laterals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: FEDERAL 920-23P
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047405460000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0840 FSL 0501 FEL QTR/QTR, SECTION, TOWNSHI	IP. RANGE. MERIDIAN:		COUNTY: UINTAH
	Township: 09.0S Range: 20.0E Meridian:	S	STATE: UTAH
CHE	CK APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
MIRU PETE MARTIN RAN 14" 36.7# SCHI	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION DMPLETED OPERATIONS. Clearly show all per BUCKET RIG. DRILLED 20" CEDULE 10 CONDUCTOR PIPE. ELL LOCATION ON 01/09/2010	CONDUCTOR HOLE TO 40'. CMT W/28 SX READY MIX 0 AT 11:00 HRS. Oi	
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	R TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 1/11/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ENTITY	ACTION	FORM

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

state CO zip 80217

Phone Number: (720) 929-6100

Well 1

API Number	Well	QQ	Sec	Twp	Rng County				
4304750381	BONAN	SENW	2	108	23E	UINTAH			
Action Code	Current Entity Number	New Entity Number	s	Spud Date			Entity Assignment Effective Date		
A	99999	17446		1/7/2010		1/	1/3/2010		
Comments: MIRL	PETE MARTIN BUCK	ET PIG (1/)5	MUL			' '/			

SPUD WELL LOCATION ON 1/7/2010 AT 17:00 HRS.

BAL = NESW

Well 2

API Number	Well	Name	QQ	QQ Sec Tv		Twp Rng Co		
4304740546	FEDERA	SESE	23	98	20E	UINTAH		
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date		
Δ	99999	17447	1/9/2010			1/	13. /2010	

Well 3

API Number	Well Name		QQ Sec Twp Spud Date			Rng County Entity Assignment Effective Date		
Action Code	Current Entity Number							
comments:				~~~				

ACTION CODES:

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity EIVED
- E Other (Explain in 'comments' section)

JAN 1 1 2010

ANDY LYTLE

Name (Please Print)

Title

REGUĽATŎRY ANALYST

1/11/2010

Date

			FORM 9			
	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE	SS .				
	DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-000577A			
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Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION			
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	TUBING REPAIR	☐ VENT OR FLARE	WATER DISPOSAL			
✓ DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
2/2/2010	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PROPETRO AIR RIG ON 1/29/2010. DRILLED 11" SURFACE HOLE TO 2740'. RAN 8-5/8" 28# J-55 SURFACE CSG. PUMP 20 BBLS OF GEL WATER Accepted by the LEAD CMT W/210 SX CLASS G HI FILL CMT 11.0 PPG, 3.82 YD. TAILED CMTUtah Division of W/175 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. DROP PLUG ON FLOII, Gas and Mining AND DISPLACE W/161.7 BBLS OF 8.3# H20, 15BBLS OF LEAD TO SUPERING RECORD ONLY W/500 PSI OF LIFT @ 5 BBLS/MIN. LAND PLUG, 900 PSI, AND CHECK FLOAT. FLOAT HELD. PUMP TOP OUT #1 W/75 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD CEMENT DOWN 1". CEMENT FELL BACK. WAIT 2 HR AND PUMP 150 SX OF SAME CEMENT. CEMENT TO SURFACE.						
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE Regulatory Analyst				
Andy Lytle SIGNATURE	720 929-6100	DATE				
N/A		2/2/2010				

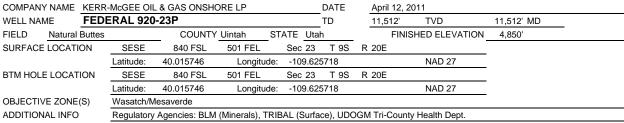
Sundry Number: 14341 API Well Number: 43047405460000

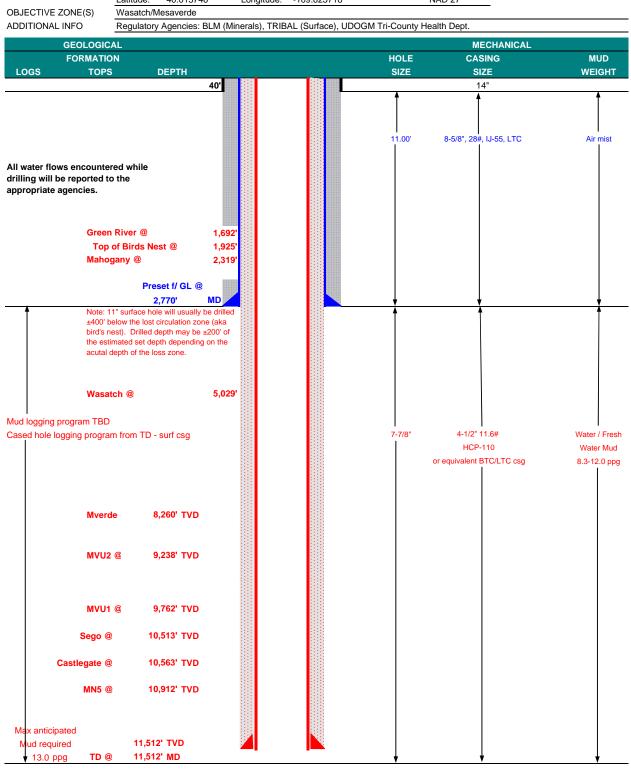
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Do not use this form for propo bottom-hole depth, reenter plu DRILL form for such proposals	sals to drill new wells, significantly deeper agged wells, or to drill horizontal laterals. I	n existing wells below current Use APPLICATION FOR PERMIT TO	7.UNIT or CA AGREEMENT NAME:
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QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SESE Section: 23	Township: 09.0S Range: 20.0E Meridian:	S	STATE: UTAH
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	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
4/12/2011	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
SUBSEQUENT REPORT	✓ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
·	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
DRILLING REPORT	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:
42 DESCRIPT PROPOSED OF SE	OMPLETED OPERATIONS. Clearly show all pe		
Kerr-McGee Oil & G change the total dep the Mesaverde gr request approval changes. Please	ias Onshore, L.P. (Kerr-McGeooth (TD) to include the Blackhoup for this well. In addition, in the well design, which inclusee attached for additional deou have any questions and/or	e) respectfully requests to nawk formation, which is in Kerr-McGee respectfully ides hole and casing size stails. Please contact the comments. Thank you.	·
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst	
SIGNATURE	, 20 323 0100	DATE	
N/A		4/12/2011	

Sundry Number: 14341 API Well Number: 43047405460000



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM





Sundry Number: 14341 API Well Number: 43047405460000



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM						DESIGN FACTORS					
										LTC	BTC
	SIZE	INTI	ERVAI	-	WT.	GR.	CPLG.	BURST	COLLAPSE	TE	NSION
CONDUCTOR	14"	0)-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,770	28.00	IJ-55	LTC	1.95	1.45	5.12	N/A
								10,690	8,650	279,000	367,000
PRODUCTION	4-1/2"	0	to	11,512	11.60	HCP-110	LTC or BTC	1.19	1.11	2.61	3.43

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	T	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1		+ 0.25 pps flocele			•		
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
		+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water	to surface, o	ption 2 will	be utilized		
Option 2 LEAD	2,270'	65/35 Poz + 6% Gel + 10 pps gilsonite	210	35%	11.00		3.82
		+ 0.25 pps Flocele + 3% salt BWOW					
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
		+ 0.25 pps flocele					
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION LEAD	4,522'	Premium Lite II +0.25 pps	330	10%	11.00		3.38
		celloflake + 5 pps gilsonite + 10% gel					
		+ 0.5% extender					
TAIL	6,990'	50/50 Poz/G + 10% salt + 2% gel	1,350	10%	14.30		1.31
		+ 0.1% R-3			•		

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	Nick Spence / Emile Goodwin	•	
DRILLING SUPERINTENDENT:		DATE:	
	Kenny Gathings / Lovel Young		

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

Sundry Number: 1-8982 Approval of this: 43047405460000

Action is Necessary

			,
	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-000577A
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
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Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
9/29/2011	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
SUBSEQUENT REPORT	☐ DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion:	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
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	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:
12. DESCRIBE PROPOSED OR CO	DMPLETED OPERATIONS. Clearly show all pert	tinent details including dates, depths, v	volumes, etc.
The operator request the pressure integ (FIT)). This well is no the formation integrit mud weight as requi	ts a variance to Onshore Order rity test (PIT, also known as a at an exploratory well and is bety is well known. Additionally, ired, the casing shoe frequent lation when drilling the entire of the control of the cont	c 2, Section III, Part Bi, for formation integrity test eing drilled in an area when an FIT is run with the breaks down and cau	Completed by the Letah Division of Letah Gas and Mining
Jaime Scharnowske	720 929-6304	Regulartory Analyst	
SIGNATURE N/A		DATE 9/29/2011	

Sundry Number: 19361 API Well Number: 43047405460000

			FORM 9
	STATE OF UTAH		TORMS
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-000577A
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	□ PRODUCTION START OR RESUME		
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✓ DRILLING REPORT	☐ TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
10/11/2011	☐ WILDCAT WELL DETERMINATION ☐	OTHER	OTHER:
MIRU ROTARY RIG. F 2011. RAN 4-1/ PRODUCTION CAS 02:00 HRS. DETAIL	MPLETED OPERATIONS. Clearly show all pertined FINISHED DRILLING FROM 2740' '2" 11.6# P-110 PRODUCTION C ING. RELEASED SST RIG 54 ON S S OF CEMENT JOB WILL BE INCL T. WELL IS WAITING ON FINAL C	TO 11,536' ON OCT. 8, ASING. CEMENTED OCTOBER 11, 2011 @ A UDED WITH THE WELL COMPLETION ACTIVI TOR	ccepted by the Itah Division of
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulartory Analyst	
SIGNATURE	.20 323 0307	DATE	
N/A		10/11/2011	

Sundry Number: 20298 API Well Number: 43047405460000

			FORM 9
	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE: DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-000577A
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Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
11/9/2011	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:
	MPLETED OPERATIONS. Clearly show all pert		
	WAS PLACED ON PRODUCTION		
HRS. THE CHRONOL	OGICAL WELL HISTORY WILL I	_	ccepted by the
	WELL COMPLETION REPOR		Itah Division of
			, Gas and Mining
			RECORD ONLY
		1 01	INCOND GIALI
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 11/11/2011	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

.,		ENTITY ACTIO	N FORM
Operator:	KERR McGEE OIL & C	GAS ONSHORE LP	Operator Account Number: N 2995
Address:	P.O. Box 173779		
	city DENVER		
	state CO	zip 80217	Phone Number: (720) 929-6304

Well 1

API Number	Well I	Name	QQ	Sec	Twp	Rng	County		
4304740546	FEDERAL 9)20-23P	SESE	23	98	20E UINTAH			
Action Code	Current Entity Number	New Entity Number	S	pud Da	te	Entity Assignment Effective Date			
C	17447	2900		1/9/201)	2/1	12012		
comments:									
moved in	to unit NI	i re				31	301201		

Well 2

API Number	Well I	Name	QQ	Sec	Twp	Rng	County
4304750580	FEDERAL	920-23JT	NENW	23	95	20e	UINTAH
Action Code	Current Entity Number	New Entity Number	s	pud Da	ite	Enti	ty Assignment fective Date
C	18212	2900	1	1/23/20	11	21	1/2012
omments: Pleas	e update the subject we	Il to reflect production	on from WS	MVD.			
	ito NBU U	_ •			*	,	3130120

Well 3

API Number	Well I	Name	QQ	Sec	Twp	Rng	County		
4304750581	FEDERAL	FEDERAL 920-231 NESE 23 9S 20E					UINTAH		
Action Code	Current Entity Number	New Entity Number	S	pud Da	te	Entity Assignment Effective Date			
C	18029	2900	4	/30/201	1	2/1	112012		
Comments:									
majed in	The MPI 1 10 K	1.4				2	120/12		

ACTION CODES:

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section RECEIVED

	JAIN	1F	SC	HA	RN	O	Λ	SKE	=
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Name (Please Print)

Signature
REGULATORY ANALYST 3/28/2012

Title Date

MAR 2 3 2012

(5/2000)

RECEIVED

JUN 2 8 2012

Form 3160-4 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

DIV. OF OIL, GAS & MINING

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

V	WELL	OMPL	ETION O	RRE	COM	PLETI	ON RI	EPOR	RT A	ND L	.OG		5. L	ease Serial JTU0577A	No.	
la. Type of b. Type of	Well Completion	Oil Well	_	Well Wor	Dr k Over	_	Other Deepen	Пρ	lug E	Rack	☐ Diff.	Dasum	6. If	Indian, All	ottee o	r Tribe Name
	•	Othe						υ.	IUE L	Jack	<i>D</i> III.	Kesvi.	7. U	nit or CA A	green	ent Name and No.
2. Name of KERR N	Operator VCGEE OIL	& GAS	ONSHORE,	-Mail: J	AIME.	Contact: J SCHARI	IAIME L	. SCHA	ARNO VADA	OWSKI	ОМ		8. L	ease Name EDERAL	and W 920-2	ell No.
3. Address	PO BOX 1 DENVER,		217				3a. Ph	Phone : 720-9	No. ((include	area cod	e)		PI Well No		
4. Location			ion clearly an	d in acc	ordance	e with Fe					·		10.	Field and Po	ool or	43-047-40546 Exploratory
At surfac	ce SESE	840FSL	501FEL 40.	015746	N Lat	, 109.62	5718 W	Lon	Í				L .	IATURAL	BUTT	ES
At top pr	rod interval r	eported b	elow SES	E 840F	SL 50	1FEL 40	.015746	N Lat	, 109	.62571	8 W Lon		0	r Area Se	c 23 T	Block and Survey 9S R20E Mer SLB
At total	depth SES	SE 840F	SL 501FEL	40.0157	46 N I	Lat, 109.	625718	W Lon	1					County or P JINTAH	arish	13. State UT
14. Date Sp 01/09/2	oudded 010			ite T.D. /08/201		ed		□ D			ed Ready to	Prod.	17.]		DF, K	B. RT, GL)*
18. Total D	epth:	MD TVD	11536 11531		19. P	lug Back	T.D.:	MD TVI		114	476 471	20. De	pth Bri	dge Plug Se		MD TVD
21. Type El	lectric & Oth DL/CNGR-C	er Mecha	nical Logs Ri	ın (Subr	nit cop	y of each)	·····		T		well core		⊠ No	☐ Yes	(Submit analysis)
	<u> </u>											DST run' ctional St		⊠ No ⊠ No	Yes	s (Submit analysis) s (Submit analysis)
23. Casing an	d Liner Reco	ord (Repo	ort all strings													
Hole Size	Size/G	rade	Wt. (#/ft.)	Top (MD	- 1	Bottom (MD)	1 -	Cemen Depth	iter		f Sks. & f Cement	Slurry (BI		Cement -	Гор*	Amount Pulled
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7.875	4.	500 I-80	11.6	-	이	1151	9		4		247	2			2616	
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							+		十			+				
24. Tubing	Record							·····								L
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25. Producir		·	· · · · · · · · · · · · · · · · · · ·				6. Perfor	ation R	ecord	!	····					
***************************************	ormation		Тор		Botto			Perforat				Size		lo. Holes		Perf. Status
<u>A)</u> B)	MESAVE	RDE		8907	1	1330			89	907 TO	11330	0.3	60	175	OPE	<u> </u>
C)															ļ	·
D)						- -										
	acture, Treat	ment, Ce	ment Squeeze	, Etc.			<u> </u>								!	
	Depth Interva								Amo	ount and	Type of l	Material				·
	890	7 TO 11	330 PUMP 1	6,565 B	BLS SL	ICK H2O	& 266,33									
28 Producti	ion - Interval	Δ				·										
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Produced	Date	Tested	Production	BBL	М	CF	BBL	Co	orr. API		Gas	ty	Floguet			
11/09/2011 Choke	11/16/2011	24 Cra	24 Hr.	0.0 Oil	Ga	3015.0	980.							FLOV	/S FRO	OM WELL
Size	Tbg. Press. Flwg. 2660		Rate	BBL		is CF	Water BBL		as:Oil atio		Well	Status				
20/64	sı	3623.0		0		3015	980					POW				
	tion - Interva		Ir.	lo:	Т.:		Luc	— <u> </u>					,			
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBI.	Gn M		Water BBL		il Gravi orr. API		Gas Gravi	ty	Producti	on Method		
Choke Size	Thg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Ga Mo		Water BBL		as:Oil		Weil	Status	<u> </u>			
	l et	I		l .	1		I	ı			1					

28b. Proc	luction - Inter-	val C					· · · · · · · · · · · · · · · · · · ·		-			
Date First	Test	Hours	Test	Oil	Gas	Water	Tau a		···	·		
Produced	Date	Tested	Production	BBI.	MCF	BBL BBL	Oil Gravity Cort, API		Gas Gravity	Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	,	Well Status			
28c. Proc	luction - Interv	/al D		-A			<u></u>		····			
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Cort. API		Gas Gravity	Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well Status	<u>l</u>		
29. Dispo	osition of Gas(Sold, used	for fuel, vent	ed, etc.)			1					
30. Sumn	nary of Porous	Zones (In	clude Aquife	rs):		***************************************			31 For	mation (Log) M	- 1	
tests,	all important including depter decoveries.	zones of po th interval t	prosity and o tested, cushic	ontents then on used, tim	eof: Cored e tool open	intervals and a , flowing and s	ll drill-stem shut-in pressure	es		muton (Log) W	aircis	
	Formation		Тор	Bottom		Description	s, Contents, et	с.		Name		Top Meas. Depth
32. Additi Attacl	ional remarks hed is the chi	(include pl	agging proce	dure): y, perforati	on report &	& final survey	:		BIR MAI WA	EEN RIVER D'S NEST HOGANY SATCH SAVERDE		1704 1898 2429 5056 8365
1. Ele	enclosed attacectrical/Mechandry Notice fo	nical Logs				2. Geologic R 6. Core Analy			3. DST Repo	ort	4. Direction	al Survey
34. I herel	by certify that	the foregoi	ng and attacl	ned informat	ion is comp	plete and corre	ct as determine	d from	all available r	ecords (see attac	thed instruction	ne).
			Electr	onic Submi	ssion #1253	325 Verified b	y the BLM W NSHORE,L,	all Infa	matina C	em.	mod moduction	10).
Name	(please print)	JAIME L.	SCHARNO	WSKE			Title R	EGULA	TORY ANA	_YST		
Signat	ture	(Electroni	c Submissio	on)			Date <u>12</u>	2/09/20 [.]	11.			
Title 18 U of the Uni	I.S.C. Section ited States any	1001 and T false, fictit	itle 43 U.S.C ious or fradu	. Section 12 lent stateme	12, make it	t a crime for ar	ny person know o any matter w	vingly ar	nd willfully to	make to any de	partment or ago	ency

Operation Summary Report

Well: FEDERAL	920-23P		Court C				ry Report	
Project: UTAH-				nductor:			Spud Date: 1/	
Event: DRILLIN								Rig Name No: PROPETRO/, SST 54/54
	RKB @4,869.00usft	(abaua 84	Start Dat					End Date: 10/11/2011
_evel)	TISDOU.SOO.PD	above Mean S	ea 	OVVI: SE	=/SE/0/9/	S/20/E/23	/0/0/26/P M/ S/84	0.00/E/0/501.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/29/2010	8:00 - 16:00	8.00	MIRU	01	В	Р	(ed.y	MOVE ON TO LOCATION, DRESS CONDUCTOR, INSTALL AIR BOWL, RIG UP RIG, BUILD DITCH, RIG UP AIR PACKAGE, RIG UP PUMP. PRIME PUMPS, P/U STRAIGHT MOTOR .16 RPG SN 8069, M/U 11" Q507
	16:00 - 0:00	8.00	MAINT	08	В	Z		SN 7019011 (1ST RUN). POWERHEAD LEAKING, WORK ON POWERHEAD. CHANGE PACKING, CHANGE OUT POWERHEAD HOUSING.
1/30/2010	0:00 - 14:00	14.00	DRLSUR	02	В	P		SPUD 1/30/2010 00:00 DRILL 44'- 1560' (1516',108'/HR) WOB 23-25K RPM 45, MOTOR RPM 104, GPM 650, ON/OFF PSI- 1500/1200
	14:00 - 14:30	0.50	DRLSUR	10	В	P		UP/DOWN/ROT=60/56/58 2K DRAG MULTISHOT WIRELINE SURVEY TOOL. SURVEY DEPTH 1500'= 1.8 DEG CORRECTED AZI= 87.3.
	14:30 - 23:00	8,50	DRLSUR	02	В	P		DRILL 1560'- 2040'. (480, 56'/HR) BACK OFF WEIGHT ON BIT SO DIFFERENTIAL PSI WAS BETWEEN 200-250 PSI. WOB 18-21K RPM 55, MOTOR RPM 104, GPM 650, ON/OFF PSI- 1450/1200
	23:00 - 23:30	0.50	DRLSUR	10	В	₽		UP/DOWN/ROT=63/58/60 3K DRAG. MULTISHOT WIRELINE SURVEY TOOL. SURVEY DEPTH 1980'= 1.2 DEG. CORRECTED AZI= 47.8
1/31/2010	23:30 - 0:00	0.50	MAINT	08	В	Z		PIT PUMP DOWN. UNABLE TO PRIME, WAIT TO REPLACE PIT PUMP.
1131/2010	0:00 - 3:30 3:30 - 17:00	3.50	MAINT	08	В	Z		REPLACE PIT PUMP, PUMP SHAFT TWISTED OFF AT BOOT.
	1,,55	13.50	DRLSUR	02	В	P		DRILL 2040'-2740' (700, 52'/HR) TD 1/31/2010 17:00 BACK OFF WEIGHT ON BIT SO DIFFERENTIAL PSI WAS BETWEEN 200-250 PSI. WOB 18-21K RPM 55, MOTOR RPM 104, GPM 650, ON/OFF PSI- 1550/1300 UP/DOWN/ROT=72/68/70 3K DRAG. FULL CIRC THROUGH OUT.
	17:00 - 18:30	1,50	CSG	05	F	P		CIRC AND CONDITION HOLE. CLEAN HOLE WITH POLYMER SWEEPS.
	18:30 - 19:30	1.00	DRLSUR	10	В	Р		RUN MULTISHOT WIRELINE SURVEY TOOL. SURVEY DEPTH 2680'= 2.2 DEGREES, 78.1 CORRECTED AZI.
	19:30 - 0:00	4.50	CSG	06	D	Р		LDDS, BREAK SUBS OFF MONEL AND MOTOR. BREAK BIT.
2/1/2010	0:00 - 2:30	2.50	CSG	12	С	Ρ,		RUN 64 JTS OF 8-5/8" 32# IJ-55 W/ 8RD LTC THREADS AND LAND FLOAT SHOE 2704' KB. RAN BAFFLE PLATE IN TOP OF SHOE JT LANDED @ 2660' KB.FILL CSG 800' AND 1700'. RUN 200' OF 1"
	2:30 - 3:00	0.50	RDMO	01	E	Р		PIPE DOWN BACKSIDE. RIG DOWN RIG, RELEASE RIG 2/01/2010 03:00

Operation Summary Report

		•
Well: FEDERAL 920-23P	Spud Conductor: 1/9/201	Spud Date: 1/30/2010
Project: UTAH-UINTAH	Site: FEDERAL 920-23P	Rig Name No: PROPETRO/, SST 54/54
Event: DRILLING	Start Date: 1/20/2010	End Date: 10/11/2011
Active Datum: RKB @4,869,00usft (abo	ove Mean Sea UWI: SE/SE/0	9/S/20/E/23/0/0/26/PM/S/840.00/E/0/501.00/0/0

ctive Datum: i evel)	RKB @4,869.00usft (a	above Mean S	Sea	UWI: SE	UWI: SE/SE/0/9/S/20/E/23/0/0/26/PM/S/840.00/E/0/501.00/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
	17:30 - 18:00	0.50	DRLPRO	02	D	Р	(uoty	DIR DRLG/SURVEY. 2740' TO 2919'. 179' @ 358 FPH. WOB 15 TO 20K. TOP DRIVE RPM 48. MUD MOTOR RPM 82. PUMPING 515 GPM. 1400 PSI OFF			
	18:00 - 20:30	2.50	DRLPRO	80	Α	P		BOTTOM. 1810 PSI ON BOTTON. RIG REPAIR. #3 GEN SET & ADJUST SCR. TURN			
	20:30 - 0:00	3.50	DRLPRO	02	D	P		STAND PIPE. FIX BACK BRAKE ON TOP DRIVE. DIR DRLG/ROTATE/SLIDE/SURVEY. 2919 TO 3322'. 403' AT 115.1 FPH. WOB 15K. TOP DRIVE RPM 60. MUD MOTOR RPM 82. PUMPING 515 GPM. 1500 PSI OFF BOTTOM. 1910 PSI ON BOTTOM			
10/1/2011	0:00 - 11:00	11.00	DRLPRO	02	Đ	P		DIR DRLG/SURVEY 3322' TO 5114'. 1792' @ 162.9 FPH. WOB 20 TO 24K. TOP DRIVE RPM 60. MUD MOTOR RPM 86. PUMPING 539 GPM. 2100 PSI OFF BOTTOM. 2460 PSI ON BOTTOM.			
	11:00 - 11:30	0.50	DRLPRO	07	Α	P		RIG SERVICE & FUNCTION BOP.			
	11:30 - 0:00	12.50	DRLPRO	02	D	P		DIR DRLG/SURVEY 5114' TO 6844', 1730' @ 138.4 FPH. WOB 20 TO 24K. TOP DRIVE RPM 60, MUD MOTOR RPM 83, PUMPING 519 GPM. 2450 PSI OFF BOTTOM. 2850 PSI ON BOTTOM.			
10/2/2011	0:00 - 3:00	3.00	DRLPRO	02	В	Р		DRLG/SURVEY 6844' TO 7234'. 390' @ 130 FPH. WOB 20 TO 24K. TOP DRIVE RPM 60. MUD MOTOR RPM 83. PUMPING 519 GPM. 2450PSI OFF BOTTOM. 2850 PSI ON BOTTOM. 6 TO 8' FLARE.			
	3:00 - 11:00	8.00	DRLPRO	22	С	P		GAS KICK, SHUT WELL IN. 750 SICP, 510 SIDPP. CIRCULATE OUT KICK. BUILD VOLUME & MIX MUD. RAISE MUD WITTO 10.1.			
	11:00 - 16:30	5.50	DRLPRO	02	В	Р		DRLG/SURVEY 7234' TO 7499'. 265' @ 48.2 FPH. WOB 22K. TOP DRIVE RPM 60, MUD MOTOR RPM 70. PUMPING 441 GPM, 1830 PSI OFF BOTTOM. 2180 PSI ON BOTTOM, 8 TO 12' FLARE.			
	16:30 - 17:00	0.50	DRLPRO	07	Α	Р		RIG SERVICE. FUNCTION BOP			
	17:00 - 0:00	7,00	DRLPRO	02	В	Р		DRLG/SURVEY 7499' TO 7899', 400' @ 57.1 FPH, WOB 24K, TOP DRIVE RPM 50, MUD MOTOR RPM 72. PUMPING 450 GPM, 2180 PSI OFF BOTTOM, 2440 PSI ON BOTTOM, 4 TO 6' FLARE,			
10/3/2011	0:00 - 8:00	8.00	DRLPRO	02	D	P		DRILL SLIDE 7899'-8274' (375', 47'/HR) WOB 18-20K AVE WOB-19K. RPM-50. DH RPM-71. SPM-91. GPM-446. ON/OFF PSI-2600/2150. DIFF-450. ON/OFF TORQUE-3500/7700. UP/DOWN/ROT-189/150/165. DRAG-24K. MUD IN 40/10.4 10% LCM. MUD OUT 40/10.3 12%. 0' SLIDE 100% ROT. NO MUD LOSSES. 4-6' FLARE			
	8:00 - 15:30	7.50	DRLPRO	02	D	Р		DRILL SLIDE 8274'-8644' (370', 49'/HR) WOB 18-22K AVE WOB-20K. RPM-50. DH RPM-73. SPM-93. GPM-455. ON/OFF PSI-2700/2200. DIFF-500. ON/OFF TORQUE-3500/8000. UP/DOWN/ROT-201/155/173. DRAG-28K. MUD IN 44/10.7 10% LCM. MUD OUT 41/10.6 10%. 0' SLIDE. 100% ROT. NO MUD			
" · · · · · · · · · · · · · · · · · · ·	15:30 - 16:00	0.50	DRLPRO	07	Α	Р		LOSSES. 3' FLARE RIG SERVICE. BOP DRILL 60 SEC. SERVICE TOP DRIVE.			

Vell: FEDERAL	920-23P		·	Soud Co	nductor: 1	1/9/2010		Spud Date: 4/	1/2010		
roject: UTAH-I					ERAL 92			Spud Date: 1/3	·		
vent: DRILLIN					e: 1/20/20				Rig Name No: PROPETRO/, SST 54/54		
ctive Datum: F		69 00usft (a	hove Mean S				3/20/E/22	ID ID IDEI DI AICUSA	End Date: 10/11/2011 0.00/E/0/501.00/0/0		
evel)						_,000,0,0	J) 201 [] 20	0/0/20/19/03/04	0.00/E/0/501.00/0/0		
Date		Time	Duration	Phase	Code	Sub	P/U	MD From	Operation		
		art-End	(hr)			Code		(usft)			
		- 23:30 - 0:00	7.50	DRLPRO	02	D C	P		DRILL SLIDE 8644'-8835' (191', 25'/HR) WOB 12-25K AVE WOB-17K. RPM-40-60. DH RPM-73. SPM-93. GPM-455. ON/OFF PSI-2500/2200. DIFF-300. ON/OFF TORQUE-3500/8000. UP/DOWN/ROT-190/155/175. DRAG-15K. MUD IN 44/10.8 10% LCM. MUD OUT 44/10.8 10%.O' SLIDE. 100% ROT NO MUD LOSSES. 2' FLARE ON CONNECITONS. PRESSURE SPIKING TO 3100+ AND TORQUE SPIKING TO 13000. MOTOR ACTING WEAK. UNABLE TO PUT FULL WT ON BIT.		
			0.00	DILLING	00	Ü	F		MIX 30 BBL 12.8# PILL AND PUMP FOR DRY JOB. NO FLOW ON FLOW CHECK,		
10/4/2011	0:00	- 7:00	7.00	DRLPRO	06	A	P		TRIP OUT OF HOLE FOR WEAK MOTOR. 45K OVER PULL OFF BOTTOM. HOLE TAKING PROPER FLUID ON TRIP OUT. NO FLOW ON FLOW CHECKS. PULL EM TOOL. DRAIN MOTOR. BREAK BIT. LD MUD MOTOR. OVER 1/4" PLAY IN BEARING WHEN WEIGHT IS SAT DOWN ON MOTOR. WORK PIPE AND BLIND RAMS.		
	7:00	- 12:30	5.50	DRLPRO	06	Α	P		P/U EXCEL 7/8, 3.3 1.5 BH .16 RPG MOTOR (SN EX614). MAKE UP FX65M SECURITY BIT (SN 11690199) W/ A TFA OF.84. SCRIBE MOTOR AND INSTALL EM TOOL. TRIP IN HOLE. BREAK CIRC 2800, 5500'. WASH BRIDGE @ 8300'.		
	12:30	- 13:00	0.50	DRLPRO	03	E	P		WASH AND REAM 8745'-8835'. 20' FLARE ON BOTTOMS UP FOR 20 MIN. NO LOSSES ON TRIP.		
		- 18:00	5.00	DRLPRO	02	D	P		MUD WT IN 10.9/45 MUD OUT 11.2/45 10% LCM. DRILL 8835'-9122' (287', 57'/HR) WOB 17-20K AVE WOB-19K. RPM-50. DH RPM-71. SPM-90. GPM-441. ON/OFF PSI-2550/2250. DIFF-300. ON/OFF TORQUE-4000/8500. UP/DOWN/ROT-192/155/180. DRAG-12K. MUD IN 47/11.0 10% LCM. MUD OUT 55/10.8 10%. 0' SLIDE. 100% ROT. NO MUD LOSSES. 3' ON CONNECTION GAS.		
	18:00	- 0:00	6.00	DRLPRO	02	D	Р		DRILL 9122'-9408' (286', 48'/HR) WOB 17-20K AVE WOB-18K. RPM-50. DH RPM-71. SPM-90. GPM-441. ON/OFF PSI-2650/2250. DIFF-400. ON/OFF TORQUE-4000/8500. UP/DOWN/ROT-205/157/195. DRAG-10K. MUD IN 45/11.0 10% LCM. MUD OUT 45/10.9 10%. 0' SLIDE. 100% ROT. NO MUD LOSSES. 3' ON CONNECTION GAS. BOP DRILL 90 SEC.		
10/5/2011	0:00	- 9:00	9.00	DRLPRO	02	D	P		DRILL 9408'- 9885' (477,53'/HR) WOB 17-21K AVE WOB-19K. RPM-50. DH RPM-71. SPM-90. GPM-441. ON/OFF PSI-2800/2400. DIFF-400. ON/OFF TORQUE-5000/11000. UP/DOWN/ROT-218/170/202. DRAG-16K. MUD IN 45/11.3 10% LCM. MUD OUT 47/11.1 10%. 0' SLIDE. 100% ROT. LOSS COMMUNICATION WITH EXCEL EM TOOL. LAST SURVEY WAS 9261'. 3' FLARE WHILE DRILLING.		

Well: FEDERAL	. 920-23P		Spud Cor	nductor:	1/9/2010		Spud Date: 1/3	0/2010		
Project: UTAH-	JINTAH		Site: FED	ERAL 92	0-23P			Rig Name No: PROPETRO/, SST 54/54		
vent: DRILLIN	G		Start Date	1/20/20	110					
	RKB @4,869.00usft (a	hove Mean S				S/20/E/23	/0/0/26/DM/C/94/	End Date: 10/11/2011 0.00/E/0/501.00/0/0		
evel)		oove mean c	Jea	J 1111. O.	_,0,0,0,	G/20/E/20/	U/U/20/FIVI/3/04(J.00/EJ0/501.00/0/0		
Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation		
	Start-End	(hr)			Code		(usft)			
	9:00 - 15:30	6.50	DRLPRO	02	D	P		DRILL 9885'- 10171' (286',44'/HR) WOB 17-21K AVE WOB-19K. RPM-50. DH RPM-71. SPM-90. GPM-441. ON/OFF PSI-2875/2500. DIFF-375. ON/OFF TORQUE-5500/12000. UP/DOWN/ROT-221/170/204. DRAG-17K. MUD IN 48/11.7 10% LCM. MUD OUT 48/11.5 8%LCM. O' SLIDE. 100% ROT. 15' FLARE FROM 9970'. 2' DRIILLING FLARE. 5' CONNECTION		
	15:30 - 16:00	0.50	DRLPRO	07	Α	Р		FLARE. (BOP DRILL 65 SEC) RIG SERVICE. SERVICE TOP DRIVE. SERVICE		
	16:00 - 0:00	8.00	DRLPRO	02	D	P		CROWN. FUNCTION PIPE RAMS AND ANNULLAR. DRILL 10171'-10449 (278', 35'/HR) WOB 17-23K AVE WOB-21K. RPM-40-55. DH RPM-71. SPM-90. GPM-441. ON/OFF PSI-2775/2500. DIFF-225. ON/OFF TORQUE-5500/12000. UP/DOWN/ROT-231/175/209. DRAG-22K. MUD IN 44/11.8. 7% LCM. MUD OUT		
10/6/2011	0:00 - 4:30	4.50	DRLPRO	02	D	Р		45/11.7 10%. 0' SLIDE. 100% ROT. DRILL SLIDE 10449'-10540' (91', 20'/HR) WOB 17-23K AVE WOB-21K. RPM-40-55. DH RPM-71. SPM-80-90. GPM-392-441. ON/OFF PSI-2775/2500. DIFF-275. ON/OFF TORQUE-5500/14000. UP/DOWN/ROT-230/175/209. DRAG-21K. MUD IN 45/11.8. 7% LCM. MUD OUT 45/11.8 10%. 0' SLIDE. 100% ROT.		
	4:30 - 5:30	1.00	DRLPRO	05	A	Р		MIX 13.8#30 BBL PILL FOR DRY JOB. CHECK FOR FLOW AND PUMP DRY JOB. STAND BACK MOUSE HOLE STD.		
	5:30 - 11:00	5.50	DRLPRO	06	Α	Р		TRIP OUT OF HOLE. 238K MAX PULL OFF BOTTOM. 30 K DRAG. NO TIGHT HOLE ON TRIP OUT. HOLE TOOK PROPER FLUID ON TRIP OUT. NO FLOW ON FLOW CHECKS. PULL ROT HEAD RUBBER AT 1100'. CHECK MOTOR. BREAK BIT. MAKE UP BIT #3 (SMITH MDI 616 WITH 6-13'S) FUNCTION PIPE AND BLIND RAMS.		
	11:00 - 12:00	1.00	DRLPRO	06	Α ,	Р		PULL EM TOOL AND CHECK TOOL FOR MEMORY CHIP. NO MEMORY CHIP IN EM TOOL. RUN BACK IN HOLE WITH OUT EM TOOL.		
	12:00 - 13:30	1.50	DRLPRO	06	Α	Р		TRIP IN HOLE TO 2800'. INSTALL ROT HEAD RUBBER. CIRC TO CLEAN ON FLOAT. NO FLOW ON FLOW CHECK.		
	13:30 - 15:00	1.50	DRLPRO	09	Α	Р		SLIP AND CUT DRILL LINE.		
	15:00 - 18:00	3.00	DRLPRO	06	Α	P		TRIP IN HOLE. NO TIGHT HOLE. NO LOSSES ON TRI. IN. BREAK CIRC 6790'. TRIP IN HOLE TO 10457'. STICKY HOLE ON BOTTOM.		
	18:00 - 18:30	0.50	DRLPRO	03	D	P		WASH AND AND REAM 10457'-10540', 10-15' FLARE ON BOTTOMS UP FOR 25 MIN. MUD IN 11.9/50 MUD OUT 11.9/48 10% LCM.		
	18:30 - 0:00	5.50	DRLPRO	02	D	Р		DRILL10540'-10707' (167',30'/HR) WOB 17-20K AVE		

12/2/2011

1:01:16PM

WOB-19. RPM-50. DH RPM-66. SPM-88. GPM-431 ON/OFF PSI-2750/2450. DIFF-300. ON/OFF TORQUE-5000/11000. UP/DOWN/ROT-231/175/218. DRAG-13K. MUD IN 45/11.9. 7% LCM. MUD OUT 45/11.9 10%. 0' SLIDE, 100% ROT. 2' CONNECTION

FLARE.

					Opera	tion S	Summa	ry Report	
Well: FEDERAL	920-23P			Spud Co	nductor: 1	/9/2010		Spud Date: 1/3	30/2010
Project: UTAH-L	JINTAH			Site: FED	ERAL 92	0-23P			Rig Name No: PROPETRO/, SST 54/54
Event: DRILLIN	G			Start Dat	e: 1/20/20	10	T		End Date: 10/11/2011
Active Datum: R Level)	KB @4,8	69.00usft (a	bove Mean S	ea	UWI: SE	/SE/0/9/	S/20/E/23/	0/0/26/PM/S/84	0.00/E/0/501.00/0/0
Date	St	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/7/2011		- 16:30 - 17:00	0.50	DRLPRO	02	D	P		DRILL 10707'-11028' (321', 19'/HR) WOB 17-25K AVE WOB-23. RPM-45-50. DH RPM-66. SPM-88. GPM-431 ON/OFF PSI-2700/2500. DIFF-200. ON/OFF TORQUE-4500/11000. UP/DOWN/ROT-231/175/220. DRAG-11K. MUD IN 50/11.9. 7% LCM. MUD OUT 49/11.9 8%. 0' SLIDE. 100% ROT. 5-10' FLARE ON BOTTOMS UP
				DRLPRO	07	Α	P		RIG SERVICE. FUNCTION PIPE RAMS, SERVICE TOP DRIVE.
10/8/2011		- 0:00 - 17:30	7.00 17.50	DRLPRO	02	D	P P		DRILL 11028'- 11133 (426',15'/HR) WOB 17-25K AVE WOB-23. RPM-45-50. DH RPM-70. SPM-90. GPM-441 ON/OFF PSI-2750/2500. DIFF-250. ON/OFF TORQUE-5500/13000. UP/DOWN/ROT-240/175/222. DRAG-18K. MUD IN 46/12.1. 7% LCM. MUD OUT 49/11.9 8%. 0' SLIDE. 100% ROT.5'-10' FLARE ON BOTTOMS UP. (SLIGHT HOLE SEEPAGE AT 11038'. LOSS 20 BBLS) DRILL 11133'-11504' (371',21.2'/HR) WOB 20-25K AVE WOB-23. RPM-45-50. DH RPM-70. SPM-90. GPM-441 ON/OFF PSI-2900/2700. DIFF-200. ON/OFF TORQUE-6000/13500. UP/DOWN/ROT-244/185/226.
	17:30	- 18:00	0.50	DRLPRO	07	A	P		DRAG-18K. MUD IN 48/12.6. 8% LCM. MUD OUT 48/12.3 8%. 0' SLIDE. 3' FLARE ON CONNECTIONS. 30'+ FLARE FROM 11440-11450' FORMATION W/ 12.4 MUD WT. (BOP DRILL 2 MIN.) SERVICE RIG. SERVICE TOP DRIVE. GREASE
	18:00	~ 18:30	0.50	DRLPRO	02	D	P		CROWN DRILL 11504'-11536' (32'. 64'/HR) TD 10/8/2011 18:30. WOB 20-25K AVE WOB-23. RPM-45-50. DH RPM-70. SPM-90. GPM-441 ON/OFF PSI-2900/2700. DIFF-200. ON/OFF TORQUE-6000/13500. UP/DOWN/ROT-244/185/226. DRAG-18K, MUD IN 48/12.6+. 8% LCM, MUD OUT 49/12.4 8%. 0' SLIDE. 4-5' FLARE FROM DOWN TIME GAS.
	18:30	- 19:30	1.00	EVALPR	05	Α	Р		CIRC BOTTOMS UP. MUD IN 12.7/48 8%. MUD OUT 12.4/49 8%. NO FLARE. MIX 30 BBL 14.2# PILL AND PUMP FOR DRY JOB. (BOP DRILL WHILE TRIPPING 2 MIN)
		- 0:00	4.50	EVALPR	06	E	Р		WPER TRIP TO SHOE. NO TIGHT HOLE. 263K TOTAL. 37K DRAG OFF BOTTOM. HOLE TOOK PROPER FLUID. NO FLOW ON FLOW CHECK AT SHOE. TRIPPING IN HOLE @ 5500'.
10/9/2011		- 2:00	2.00	EVALPR	06	E	Р		WPER TRIP BACK TO BOTTOM. NO TIGHT HOLE AND NO FILL. NO FLOW ON MUD CHECKS. BROKE CIRC 7155'.
	2:00	- 4:00	2.00	EVALPR	05	Α	Р		CIRC AND CONDTION HOLE. 30' FLARE ON BOTTOMS UP. MUD IN 12.8/49 8%. MUD OUT 12.6/50 8%. MIX 30 BBL 14.3# PILL AND PUMP FOR DRY JOB.

Well: FEDERAL	920-23P			Spud Co	nductor: 1	/9/2010		Spud Date: 1/3	30/2010		
Project: UTAH-L	JINTAH				ERAL 92			opud bate. 17	Rig Name No: PROPETRO/, SST 54/54		
Event: DRILLING	 3			Start Date	e: 1/20/20	10	1				
Active Datum: R	KB @4,8	69.00usft (a	bove Mean Se				S/20/E/23/	0/0/26/PM/S/84	End Date: 10/11/2011 0.00/E/0/501,00/0/0		
-evel)											
Date	St	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
		- 10:00	6.00	EVALPR	06	В	P		TRIP OUT OF HOLE FOR LOGS. PULL 259 K OFF BOTTOM. 33K OVER. NO TIGHT HOLE ON TRIP OUT. HOLE TAKING PROPER FLUID. NO FLOW ON FLOW CHECKS. PULL ROT HEAD RUBBER AT HWDP. HOLD SAFETY MEETING. LD MONELS. BREAK BIT AND LD MOTOR. CLEAR CATWALK FOR BAKER ATLAS. FUNCTION PIPE RAMS AND BLIND RAMS. (BOP DRILL WHILE TRIPPING 2 MIN)		
		- 16:00	6.00	EVALPR	11	D	Р		HOLD SAFETY MEETING. RIG UP BAKER ATLAS. RUN TRIPLE COMBO LOGS FROM 11538' TO 2704'. LD TRIPLE COMBO TOOLS AND RIG DOWN BAKER ATLAS.		
		- 20:00	4.00	CSG	06	D	Р		MAKE UP BIT SUB AND BIT. TRIP IN HOLE WITH HWDP. INSTALL ROT HEAD RUBBER. TRIP IN HOLE WITH GOOD DISPLACEMENT. NO TIGHT HOLE ON TRIP IN. FILLED PIPE 2700', 5800'. NO FILL ON BOTTOM OF HOLE. (BOP DRILL WHILE TRIPPING 2 MIN)		
		- 21:30	1.50	CSG	05	Α	P		CIRC GAS OUT 20-25' FLARE. HOLD SAFETY MEETING WITH KIMZEY LAYDOWN CREW AND RIG UP LAYDOWN MACHINE. BUILD 30 BBL 13.9# PILL AND PUMP FOR DRY JOB.		
		- 0:00	2.50	CSG	06	D	Р		LAY DOWN DRILL PIPE TO 7100'. 261K PULL OFF BOTTOM. 34K OVER. NO TIGHT HOLE. HOLE TAKING PROPER FLUID.		
10/10/2011		- 6:00	6.00	CSG	06	D	Р		LAY DOWN DRILL STRING. PULL ROT HEAD RUBBER. LAY DOWN HWDP. PULL WEAR BUSHING. WORK PIPE RAMS.		
	6:00	- 7:30	1.50	CSG	12	Α	Р		HOLD SAFETY MEETING.REMOVE RIG ELEVATORS. REMOVE RIG BAILS. MOVE PIPE RACKS. TURN PIPE TROUGH. INSTALL 18' BAILS. RIG UP CSG ELEVATORS, HYDRALIC CSG TONGS, BACK UP TONGES AND SLIPS.		
	7:30	- 9:30	2.00	CSG	12	С	P		MAKE UP WEATHERFORD FLOAT SHOE, AND FLOAT COLLAR W/ BAKER LOCK, RUN IN HOLE WITH 21 JTS THAT NEEDED COLLARS TIGHTENED ALSO, MADE UP ALL PIPE 1/2 THROUGH TRIANGLE.		
		- 17:30	8.00	CSG	12	С	P		RUN TOTAL OF 272 JTS OF 4.5" 11.6# P-110 BTC CSG. FLOAT SHOE SET @ 11519'KB. FLOAT COLLAR SET AT 11474'KB. MESA MARKER SET AT 8244' KB. WASATCH MARKER SET @ 4974' KB. RAN CENTRALIZERS FIRST THREE JTS THEN EVERY THIRD JT FOR TOTAL OF 15 CENTRALIZERS. (TORQUE RANGES FROM 6800 TO 10000) AVERAGE TORQUE 7500. INSTALL CEMENT HEAD. FILL CSG 800', 2000', 6000'.		
	17:30	- 19:00	1.50	CSG	05	D	Р		CIRC OUT GAS @ 367 GPM. MUD WT 12.9 VIS 48 LCM 7%. 15-20' FLARE ON BOTTOMS UP. (NO LOSSES) HOLD SAFETY MEETING. RIG DOWN CSG CREW AND LD TRUCK, HOLD SAFETY MEETING AND RIG UP BJ CEMENTERS.		

				U	S ROC	KIES RE	EGION	
				Opera	tion S	umma	ry Report	
Well: FEDERAL	920-23P		Spud Co	nductor: 1	1/9/2010		Spud Date: 1/3	0/2010
Project: UTAH-U	HATMI		Site: FEI	DERAL 92	0-23P			Rig Name No: PROPETRO/, SST 54/54
Event: DRILLIN	G		Start Dat	ate: 1/20/2010				End Date: 10/11/2011
Active Datum: RKB @4,869.00usft (above Mean Sea Level)			ea	UWI: S	E/SE/0/9/	S/20/E/23	/0/0/26/P M /S/840	0.00/E/0/501.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	19:00 - 22:30 22:30 - 0:00	3.50	CSG	12	E	P	V	PERFORM POP OFF TEST TO 4500. LINE TEST TO 5500 PSI. PUMP 5 BBLS OF FRESH WATER. PUMP (20 SX) 8 BBLS OF 11.9# 2.31 YD 12.93 GAL/SK SCAVENGER CEMENT. PUMP (751SX) 242 BBLS OF 12.9# 1.81 YD 9.14 GAL/SK LEAD CEMENT. PUMP (1721 SX) 401 BBLS 14.3# 1.31 YD 5.9 GAL/SK TAIL CEMENT. SHUT DOWN. CLEAN UP LINES. DROP PLUG AND DISPLACE W/ 178.3 BBLS OF FRESH WATER. GOOD RETURNS THROUGH OUT JOB TILL DISPLACEMENT. LOST HALF RETURNS ON DISPLACEMENT. 40 BBLS OF CONTAMINATED MUD AND THEN 10 BBLS OF CEMENT TO SURFACE. LOSS CIRCULATION LAST 10 BBLS OF DISPLACEMENT. HAD LIFT PSI OF 3560. BUMP PLUG. HELD 4400 PSI FOR 5 MINS. CHECKED FLOATS AND FLOATS HELD. RIGGED DOWN BJ SERVICE. PICK UP STACK W/ TROLLEY. NOT ENOUGH ROOM TO SET STACK UNDER BOP. SET BACK DOWN STACK AND PULL ROT HEAD RUBBER. SET C-22 SLIPS THROUGH STACK W/ 105C PICK UP STACK WITH TROLLEY AND CUT OFF CSG. CLEANING PITS AT RT. (5 EXTRA HANDS AT 05:30 TO HELP READY
10/11/2011	0:00 - 2:00	2.00	RDMO	14	Α	Р		RIG FOR TRUCKS IN A.M.) CLEAN PITS AND RELEASE RIG 10/11/2011 02:00

12/2/2011 1:01:16PM

144-11	~~~		~								
Well: FEDERAL				nductor: 1			Spud Date: 1/3	30/2010			
Project: UTAH-U	JINTAH		Site: FEI	DERAL 92	0-23P			Rig Name No: PROPETRO/, SST 54/54			
Event: DRILLIN	G		Start Dat	e: 1/20/20	10			End Date: 10/11/2011			
Active Datum: R Level)	KKB @4,869.00usft (a	above Mean Se	ea	UWI: SE	E/SE/0/9/	S/20/E/23	0/0/0/26/PM/S/84	0.00/E/0/501.00/0/0			
Date	Time	Duration	Phase	Code	Sub	P/U	140.5				
	Start-End	(hr)			Code		MD From (usft)	Operation			
	2:00 - 2:00	0.00	RDMO	A	kd		\	CONDUCTOR CASING:			
								Cond. Depth set:44			
								Cement sx used:20			
								SPUD DATE/TIME.1/30/2010 0:00			
								SURFACE HOLE:			
								Surface From depth:44			
								Surface To depth:2,740			
								Total SURFACE hours:36.00			
								Surface Casing size:8.625, 32#			
								# of casing joints ran:64			
								Casing set MD:2,704.0			
								# sx of cement:610 Cement blend (ppg:)15.8/11.0/15.8			
								Cement yield (ft3/sk):1.15/3.82/1.15			
								# of bbls to surface:1			
								Describe cement issues: NONE			
								Describe hole issues:NONE			
								PRODUCTION:			
								Rig Move/Skid start date/time:9/25/2011 3:00			
								Rig Move/Skid finish date/time:9/29/2011 21:00			
								Total MOVE hours:114.0			
								Prod Rig Spud date/time:9/30/2011 15:00			
								Rig Release date/time:10/11/2011 2:00			
								Total SPUD to RR hours:251.0			
								Planned depth MD11,512			
								Planned depth TVD11,512			
								Actual MD:11,536			
								Actual TVD:11,531			
								Open Wells \$: AFE \$			
								Open wells \$/ft:			
								PRODUCTION HOLE:			
								Prod. From depth:2,740 Prod. To depth:11,536			
								Total PROD hours: 152			
								Log Depth:11538			
								Float Collar Top Depth:11474			
								Production Casing size:4 1/2			
								# of casing joints ran:272			
								Casing set MD:11,519.0			
								Stage 1			
								# sx of cement:2,492			
								Cement density (ppg:)SCAV 11.9/LEAD 12.9/TAIL 14.3			
								Cement yield (ft3/sk):SCAV 2.31/LEAD 1.81/TAIL			
								1.31			
								Est. TOC (Lead & Tail) or 2 Stage :LEAD 19'/TAIL 4517'			
								Describe cement issues:40 BBLS OF			
								CONTAMINATED MUD. LOSS2/3 CIRC THROUGH			
								DISPLACEMENT. 10 BBLS CEMENT TO SURFACE			
								Describe hole issues:RIG MOVE FROM GRANGER			

12/2/2011

1:01:16PM

US ROCKIES REGION Operation Summary Report Well: FEDERAL 920-23P Spud Conductor: 1/9/2010 Spud Date: 1/30/2010 Project: UTAH-UINTAH Site: FEDERAL 920-23P Rig Name No: PROPETRO/, SST 54/54 Event: DRILLING Start Date: 1/20/2010 End Date: 10/11/2011 Active Datum: RKB @4,869.00usft (above Mean Sea UWI: SE/SE/0/9/S/20/E/23/0/0/26/PM/S/840.00/E/0/501.00/0/0 Level) Date Time Phase Duration Sub MD From Operation Start-End (hr) Code (usft) WYOMING.EXCEL UNABLE TO GET SURVEYS ON BOTTOM OF HOLE. DIRECTIONAL INFO: KOP:0 Max angle:3.40 Departure: Max dogleg MD:3.96 @ 3155'.

12/2/2011

1:01:16PM

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	FEDERAL 920-23P	Wellbore No.	ОН
Well Name	FEDERAL 920-23P	Wellbore Name	FEDERAL 920-23P
Report No.	1	Report Date	10/21/2011
Project	UTAH-UINTAH	Site	FEDERAL 920-23P
Rig Name/No.		Event	COMPLETION
Start Date	10/21/2011	End Date	11/9/2011
Spud Date	1/30/2010	Active Datum	RKB @4,869.00usft (above Mean Sea Level)
UWI	SE/SE/0/9/S/20/E/23/0/0/26/PM/S/840.00/E/0	/501.00/0/0	

1.3 General

Contractor	JW WIRELINE	Job Method	PERFORATE	Supervisor	STEVE WALL, SR.
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

1.4 Initial Conditions

1.5 Summary

Fluid Type		Fluid Density	Gross interval	8,907.0 (usft)-11,330.0 (us	Start Date/Time	11/7/2011	12:00AM
Surface Press		Estimate Res Press	No. of intervals	34	End Date/Time	11/8/2011	12:00AM
TVD Fluid Top		Fluid Head	Total Shots	C	Net Perforation Interval		51.00 (usft)
Hydrostatic Press		Press Difference	Avg Shot Density	0.00 (shot/ft)	Final Surface Pressure		
Balance Cond	NEUTRAL				Final Press Date		

2 intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
11/8/2011 12:00AM	MESAVERDE/			8,907.0	0.809,8			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T	MD Top (usft)	MD Base (usft)	Shot Density	Misfires/ Add. Shot	Diamete r	Carr Type /Carr Manu	Size	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight	Reason	Misrun
	<u> </u>		(usft)	<u> </u>		(shot/ft)		(in)		(in)	i		(gram)		
	MESAVERDE/			8,928.0	8,929.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
	MESAVERDE/			8,944.0	8,945.0			0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	1
12:00AM														N	
1	MESAVERDE/			8,984.0	8,986.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
1	MESAVERDE/			0.600	9,010.0			0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	
12:00AM														N	
1	MESAVERDE/			9,056.0	9,057.0			0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	
12:00AM	**************************************													N	
1	MESAVERDE/			9,202.0	9,203.0			0.360	EXP/	3.375	90.00			PRODUCTIO	
12:00AM	MECAL/EDDE/			0.0740	0.070.0									N	
12:00AM	MESAVERDE/			9,274.0	9,276.0			0.360	EXP/	3.375	120.00			PRODUCTIO	
	MECAL/EDDE/			0.004.0	0.005.0			0.000	=1/0/	==				N	
12:00AM	MESAVERDE/			9,304.0	9,305.0			0.360	EXP/	3.375	90.00			PRODUCTIO	
	MESAVERDE/			9,326.0	0.227.0			0.000	-VD/	0.075	00.00			N	
12:00AM	WILOAVENDE/			9,320.0	9,327.0			0.360	EXPI	3.375	90.00			PRODUCTIO	
1	MESAVERDE/			9.356.0	9,358.0			0.360 1	=VD/	3.375	120.00			N	
12:00AM	MEO/ N ENDE			0,000.0	2,000.0			0.300	EAF/	3.375	120.00			PRODUCTIO N	
Y	MESAVERDE/			9,584.0	9,586.0			0.360	EYD/	3.375	90.00			PRODUCTIO	
12:00AM					-,			0.000		0.070	30.00			N	
11/8/2011	MESAVERDE/			9,630.0	9,632.0			0.360	EXP/	3.375	90.00			PRODUCTIO	
12:00AM				-	,					0.0.0	00.00			N	
11/8/2011	MESAVERDE/			9,752.0	9,754.0			0.360	EXP/	3.375	90.00			PRODUCTIO	
12:00AM														N	
11/7/2011	MESAVERDE/			9,850.0	9,852.0			0.360 E	XP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
1	MESAVERDE/			9,879.0	9,880.0			0.360 E	XP/	3.375	90.00		23.00	PRODUCTIO	
12:00AM														N	
	MESAVERDE/			9,961.0	9,962.0			0.360 E	XP/	3.375	90.00		23.00	PRODUCTIO	İ
12:00AM														N	
	MESAVERDE/	*		10,084.0	10,085.0			0.360 E	XP/	3.375	90.00		23.00	PRODUCTIO	
12:00AM														N	
	MESAVERDE/			10,104.0	10,106.0			0.360 E	XP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM	450 AL (5005)													N	
11/7/2011 12:00AM	MESAVERDE/			10,949.0	10,950.0			0.360 E	XP/	3.375	90.00		23.00	PRODUCTIO	1
	MECAL/EDDE/			40.000.0	40.000.0									N	
11///2011 I 12:00AM	MESAVERDE/			10,960.0	10,962.0			0.360 E	XP/	3.375	90.00		23.00	PRODUCTIO	1
	MED AVEDDE!			40 0TO C										N	1
	MESAVERDE/			10,970.0	10,972.0			0.360 E	XP/	3.375	90.00			PRODUCTIO	
12:00AM														N	

2.1 Perforated Interval (Continued)

Date	Formation/	CCL@	CCL-T	MD Top	MD Base	Shot	Misfires/	Diamete	Carr Type /Carr Manuf	Carr	Phasing	Charge Desc/Charge	Charge	Reason	Misrun
	Reservoir	(usft)	S	(usft)	(usft)	Density	Add. Shot	r		Size	(°)	Manufacturer	Weight		
			(usft)			(shot/ft)		(in)		(in)			(gram)		
11/7/2011	MESAVERDE/			10,984.0	10,985.0			0.360	EXP/	3.375	90.00		23.00 PRODUCTIO		
12:00AM														N	
11/7/2011	MESAVERDE/			11,017.0	11,018.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
11/7/2011	MESAVERDE/			11,024.0	11,026.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
11/7/2011	MESAVERDE/			11,050.0	11,052.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
11/7/2011	MESAVERDE/			11,060.0	11,062.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM									5.555 2747				N		
11/7/2011	MESAVERDE/			11,123.0	11,125.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
11/8/2011	MESAVERDE/			11,209.0	11,210.0			0.360 EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
11/8/2011	MESAVERDE/			11,219.0	11,220.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
11/8/2011	MESAVERDE/			11,228.0	11,230.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
11/8/2011	MESAVERDE/			11,240.0	11,242.0			0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM										0.010	120.00			N	
11/8/2011	MESAVERDE/			11,260.0	11,262.0			0.360	EXP/	3.375	120.00			PRODUCTIO	
12:00AM				. ,	,			3.000	her XI /	0.070	120.00			N	
	MESAVERDE/			11,329.0	11,330.0			0.360	EYD/	3.375	90.00				
12:00AM				11,020.0	11,000.0			0.300	LAIT	3.373	50.00			PRODUCTIO N	
														IN	

3 Plots

3.1 Wellbore Schematic



Operation Summary Report

Mally EEDEDAL	200 000						ry Report	
Well: FEDERAL Project: UTAH-L				nductor: 1			Spud Date: 1/3	
	···	·		DERAL 92				Rig Name No:
vent: COMPLE				te: 10/21/2				End Date: 11/9/2011
Active Datum: R .evel)	KKB @4,869.00usf	(above Mean S	ea 	UWI: SE	E/SE/0/9/	S/20/E/23/	D/0/26/PM/S/84	0.00/E/0/501.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/21/2011	10:00 - 15:30	5.50	СОМР	33		Р		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 16 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 17 PSI. 1ST PSI TEST T/ 9000 PSI. HELD FOR 30 MIN LOST 67 PSI. NO COMMUNICATION WITH SURFACE CSG BLEED OFF PSI. SWI REPAIRED TOP FRAC VALVE BETWEEN 3500 PSI
10/31/2011	7:00 - 7:30	0.50	COMP	48		P		TEST & 9000 PSI TEST HSM, RIGGING DWN & RIGGING UP.
	7:30 - 12:30	5.00	COMP	30	Α	Р		RD OFF NBU 922-29KT, MIRU, ND FV, NU BOPS, RU FLOOR.
44/4/0044	7:00 7:00		COMP	31	ł	P		TALLY & PU 37/8 BIT & 170 JTS 23/8 L-80 OFF FLOAT, EOT @ 5403' SWI SDFN.
11/1/2011	7:00 - 7:30	0.50	COMP	48		P		HSM, PINCH POINTS & EMERGENCY RESPONSE
11/2/2011	7:30 - 15:00 7:00 - 7:30		COMP	31 48	I	P		PU REM 108 JTS 23/8 L-80 OFF FLOAT TOTAL 278 JTS IN EOT @ 8826'. POOH L/D BIT. ND BOPS NU FV, RU B&C TEST CSG TO 1,000 PSI, LOST 19 # PSI IN 15 MIN, TEST TO 3506# LOST 38 #PSI IN 15 MIN, TEST TO 9075 LOST 57 # PSI IN 30 MIN. RD B&C SWI SDFN. HSM, RIGGING UP & WORKING W/ WIRELINE.
	7:30 - 15:00		COMP	37	В	P		
44121224					J			RU JW WIRELINE, WAIT ON ORDERS WHAT TO PERF.SDFN
11/3/2011	7:00 - 7:30	0.50	COMP	48		Р		HSM, WORKING W/ WIRELINE & FRAC CREW.
	7:30 - 16:00		COMP	46	E	P		RU WELL HEAD TARPS & HEATER. (STG #1) RIH W/ 31/8 EXP 23 GRM .36" HOLES 90 & 120 DEG PHASING GUNS & PERF AS OF PROCEDURE. RU SUPERIOR, WAIT ON FRAC TREE, & PUMP TRUCK. RU SAME.
	16:00 - 19:30	3.50	COMP	36	E	P		PRIME PUMPS & LINES, TEST TO 9500 PSI, FOR 15 MIN LOST 30 PSI, SET POPOFF @ 8800 PSI, SET KICK OUTS @ #1 8600 PSI, #2 8600 PSI, #3 8600 PSI, #4 8600 PSI, #5 8800 PSI, #6 8800 PSI, #3 8600 PSI, #4 8600 PSI, #5 8800 PSI, #6 8800 PSI, White PSI, White PSI, BRK 4200 PSI @ 5 BPM. ISIP 3824 PSI, FG .78. SPOT ACID ON PERFS, SHUT DWN LET SOAK FOR 5 MIN. CALC HOLES OPEN @ 51.1 BPM @ 7579 PSI = 100% HOLES OPEN. MP 8255 PSI, MR 52.1 BPM, AP 7247 PSI, AR 50.0 BPM. ISIP 3872 PSI, FG .78 NPI 48 PSI. SWI DRAIN UP SDFN.

Vell: FEDERAL	920-23P			Spud Co	inductor: 1	/9/2010		Spud Date: 1/3	30/2010			
Project: UTAH-	JINTAH			Site: FEI	DERAL 92	0-23P			Rig Name No:			
vent: COMPL	ETION			Start Dat	e: 10/21/2	011			End Date: 11/9/2011			
ctive Datum: F	RKB @4,8	69.00usft (a	bove Mean S				S/20/E/23/	0/0/26/PM/S/84	340.00/E/0/501.00/0/0			
evel)												
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
11/4/2011		- 10:30	4.50	COMP	37	В	P	Control	HSM, WORKING W/ WIRELINE, (STG #2) PU 41/2 HAL 10-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET DOWN @ 10, 300' PULLED UP TO 10,250' PLUG HUNG UP, WORK TRYING TO GET FREE NO LUCK, PUMP 10 BBLS WTR PAST PLUG @ 1.5 BPM @ 3400 PSI, WORK PLUG, STILL STUCK SURGED WELL SEVERAL TIMES PLUG STILL STUCK, SET PLUG @ 10,250', POOH L/D GUNS & SETTING TOOL, RD WIRELINE.			
11/5/2011	7:00	- 17:30 - 7:15	7.00 0.25	COMP	31	1	P		BLEAD OFF WELL, ND FV, NU BOPS, RU FLOOR, RIH W/ 3 7/8 BIT & POBS, 1.875 X/N & 278 JTS 23/8 L-80 F/ DERICK, PU 47 JTS TAG UP @ 10.298' S.L.M, RU DRLG EQUIP, BROKE CIRC CONV, TEST BOPS TO 3,000# FOR 15 MIN, D/O CBP IN 30 MIN 2,000# PSI INCREASE. LET CSG FLOW TO CLEAN UP. SWI LOCK RAMS. JSA-SAFETY MEETING, TRIP TBG W/ PRESSURE,			
	7:15	- 8:00	0.75	COMP	31	1	Р		1750# 0N CSG, BLOW DN TO PIT, GOT PRESSURE DN TO 500#, TIH W/ 2 3/8" TBG PUSH CBP DN TO @ 11,375',			
	3:00	- 12:30	4.50	COMP	31	ŧ	P		TOOH W/ BLOW CSG TO PIT, LAY DN 80 JTS ON TRAILER, PULLED TO 3000', PUMP 60 BBLS 10# BRINE WTR, PULLED TO @ 600', WELL FLOWING OUT CSG W/ PRESSURE UP TO 700#, SHUT BOPS, LET WELL BLOW DN TO PIT, PUMP 60 BBLS 10# BRINE WTR, P/O LAST 10 STANDS, LAY DN BIT			
		- 15:00	2.50	COMP	31	i			PUMP 70 BBLS FRESH WTR DN CSG TRY TO FLUSH CSG, PRESSURE UP OVER 3000#, RIG PUMP DOWN TO PUMPING LESS THEN 1 BBL/ MIN, IT TAKE 175 BBLS TO FLUSH CSG, SHUT DOWN SHUT WELL IN, WAIT TILL MONDAY HAVE SUPERIOR FLUSH CSG BEFORE WRELINE RIH SET CBP, R/U J/W WRELINE, SDFWE,			
11/7/2011	6:30	- 7:00	0.50	COMP	48		P		HSM, WORKING WITH PRESSURE.			
	7:00	- 8:00	1.00	COMP	36	E	P		SICP 3600 PSI, RU SUPERIOR INTO BOPS, REFLUSH CSG W/ 174 BBLS @ 10.3 BPM @ 5300 PSI.			
	8:00	- 12:00	4.00	COMP	34	1	Р		RU 10-K LUBRICATOR, RIH W/ 41/2 10-K CBP & SET @ 11,155' POOH BLEAD OFF WELL. ND BOPS, NU FV, RU FRAC TREE.			
	12:00	- 15:19	3,32	COMP	36	E	P		STG #2) PU 41/2 HAL 10-K CBP & 31/8 EXP 23 GRM .36" HLS. 120 DEG PHASING, PERF AS OF PROCEDURE. WHP 1800 PSI, BRK 5190 PSI @ 15 BPM. ISIP 3456 PSI, FG .75. CALC HOLES OPEN @ 44.6 BPM @ 6998 PSI = 65% HOLES OPEN. MP 8388 PSI, MR 51.0 BPM, AP 7394 PSI, AR 48.9 BPM ISIP 3597 PSI, FG .76 NPI 141 PSI.			

Operation Summary Report

Vell: FEDERAL	920-23P	· · · · · · · · · · · · · · · · · · ·	Shud Co	onductor: 1	/0/2010		Caval Data A	20/2022		
Project: UTAH-I	····			DERAL 92			Spud Date: 1/3			
vent: COMPLI								Rig Name No:		
				te: 10/21/2		0/00/5/00	2/2/22/23/24/2	End Date: 11/9/2011		
evel)	RKB @4,869,00usft (above Mean S	ea	OVVI. SE	-/2E/0/9/	5/20/E/23/	0/0/26/PM/S/84	.00/E/0/801.00/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
	15:19 - 17:43	2.40	COMP	36	E	P		(STG #3) PU 41/2 HAL 10-K CBP & 31/8 EXP 23 GRM .36" HLS, 90 DEG PHASING, SET CBP @ 11,010' PERF AS OF PROCEDURE. WHP 554 PSI, BRK 4383 PSI @ 7.1 BPM. ISIP 4036 PSI, FG .81. CALC HOLES OPEN @ 50.3 BPM @ 7907 PSI = 81% HOLES OPEN. MP 8256 PSI, MR 51.1 BPM, AP 7751 PSI, AR 50.5 BPM ISIP 3660 PSI, FG .77 NPI - 376 PSI. SAND WAS SHORT ON REPORT, BUT WAS PUMPED, DUE TO		
	17:43 - 19:30	1.78	СОМР	34	н	Р		SREW ADJUSTMENT. APROX 34,000 LBS (STG #4) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 90 & 120 DEG PHASING, SET CBP @		
11/8/2011	7:38 - 9:26	0.63	COMP	48	_	P		10,136' PERF AS OF PROCEDURE. POOH SWI SDFN. HSM W/ SUPERIOR, CHANGING POP OFF & KICK OUTS. (STG #4) WHP 1800 PSI, BRK 3166 PSI @ 36.1 BPM. ISIP 2741 PSI, FG .71. CALC HOLES OPEN @ 36.1 BPM @ 5918 PSI = 95% HOLES OPEN. MP 8388 PSI, MR 51.0 BPM, AP 7394 PSI, AR 48.9 BPM ISIP 3597 PSI, FG .76 NPI 141 PSI.		
	7.30 - 9.26	1.80	COMP	36	E	P		(STG #5) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 90 DEG PHASING, SET CBP @ 9784'. PERF AS OF PROCEDURE. WHP 1760 PSI, BRK 3479 PSI @ 5.1 BPM. ISIP 2349 PSI, FG .68. CALC HOLES OPEN @ 42.4 BPM @ 6279 PSI = 97% HOLES OPEN. MP 6524 PSI, MR 58.0 BPM, AP 6093 PSI, AR 48.2 BPM ISIP 3021 PSI, FG .75 NPI 672 PSI.		
	9:26 - 11:20	1.90	СОМР	36	E	Р		(STG #6) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 90 & 120 DEG PHASING, SET CBP @ 9388", PERF AS OF PROCEDURE. WHP 1620 PSI, BRK 2788 PSI @ 5.0 BPM. ISIP 2343 PSI, FG .69. CALC HOLES OPEN @ 49.6 BPM @ 6900 PSI = 100% HOLES OPEN. MP 6198 PSI, MR 59.5 BPM, AP 5691 PSI, AR 49.4 BPM ISIP 2979 PSI, FG .76 NPI 636 PSI.		

				U	3 KUC	VIES KI	EGION		
				Opera	tion S	umma	ry Report		
Well: FEDERAL	. 920-23P		Spud Co	nductor: 1	1/9/2010		Spud Date: 1/3	80/2010	
Project: UTAH-I	UINTAH		Site: FEI	DERAL 92	0-23P		*** <u>**********************************</u>	Rig Name No:	
Event: COMPLI	ETION		Start Dat	e: 10/21/2	2011			End Date: 11/9/2011	
Active Datum: F Level)	RKB @4,869.00usft (a	bove Mean S	ea	UWI: SE	E/SE/0/9/5	S/20/E/23	20/E/23/0/0/26/PW/S/840.00/E/0/501.00/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
	11:20 - 13:00	1.67	COMP	36	E	P	(usiy	(STG #7) PU 41/2 HAL 8-K CBP & 31/8 EXP 23 GRM .36" HLS, 90 & 120 DEG PHASING, SET CBP @ 9087', PERF AS OF PROCEDURE. WHP 1671 PSI, BRK 2262 PSI @ 5.0 BPM. ISIP 2318 PSI, FG. 70. CALC HOLES OPEN @ 48 BPM @ 5818 PSI = 100% HOLES OPEN. MP 6434 PSI, MR 49.5 BPM, AP 5897 PSI, AR 45 BPM ISIP 2927 PSI, FG. 76 NPI 609 PSI. TOTAL 266,338 LBS 30/50 TLC TOTAL 80,016 30/50 WHITE	
	13:00 - 14:30	1.50	СОМР	34	i	Þ		TOTAL 16,565 BBLS WATER TOTAL 1007 GALS SCALE INH TOTAL 458 GALS BIOCIDE (KILL PLUG) RIH W/ 41/2 8-K CBP & SET @ 8857', POOH SWI, RD WL & FRAC CREW.	
	14:30 - 18:00	3,50	COMP	31	i			ND FV, NU BOPS, RU FLOOR. RIH W/ 37/8 BIT, POBS 1.875 X/N & TBG 278 JTS TO KILL PLUG, RU DRLG EQUIP PREP TO D/O IN AM.	
11/9/2011	7:00 - 7:30	0.50	СОМР	48		Р		HSM, WOTKING W/ POWER SWIVEL & WORKING UNDER PRESSURE.	

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well Information

Well	FEDERAL 920-23P	Wellbore No.	ОН
Well Name	FEDERAL 920-23P	Common Name	FEDERAL 920-23P
Project	UTAH-UINTAH	Site	FEDERAL 920-23P
Vertical Section		North Reference	True
Azimuth			
Origin N/S		Origin E/W	
Spud Date	1/30/2010	UWI	SE/SE/0/9/S/20/E/23/0/0/26/PM/S/840.00/E/0/50 1.00/0/0
Active Datum	RKB @4,869.00usft (above Mean Sea	a Level)	1

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	PROPETRO
Started	1/29/2010	Ended	
Tool Name	MSS	Engineer	Anadarko

2.1.1 Tie On Point

MD	inc	Azi	TVD	N/S	E/W
(usft)	(°)	(°)	(usft)	(usft)	(usft)
14.00	0.00	0.00	14.00	0.00	

2.1.2 Survey Stations

Date	Туре	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	TFace (°)
1/29/2010	Tie On	14.00	0.00	0.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/30/2010	NORMAL	1,514.00	1.80	87.30	1,513.75	1,11	23.53	1.11	0.12	0.12	0.00	87.30
	NORMAL	1,994.00	1.20	47.80	1,993.60	4.84	34.79	4.84	0.24	-0.13	-8.23	-138.87
1/31/2010	NORMAL	2,694.00	2.20	78.10	2,693.29	12.54	53,37	12,54	0.19	0.14	4.33	57.77

2.2 Survey Name: PRODUCTION

Survey Name	PRODUCTION	Company	EXCEL
Started	9/25/2011	Ended	
Tool Name	MWD	Engineer	Anadarko Employee

2.2.1 Tie On Point

MD (usft)	Inc Azi (°) (°)		TVD (usft)	N/S (usft)	E/W (usft)	
2,694.00	2.20	78.10	2,693.29	12.54	53.37	

2.2.2 Survey Stations

Date	Туре	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft	Build (°/100 usft	Turn (°/100usft	TFace (°)
9/25/2011	Tie On	2,694.00	2,20	78.10	2,693.29	12.54	53.37	12,54	0.00	0.00	0.00	0.00

2.3 Survey Name: PRODUCTION

Survey Name	PRODUCTION	Company	EXCEL
Started	9/25/2011	Ended	
Tool Name	MWD	Engineer	Anadarko Employee

2.3.1 Tie On Point

MD	Inc	Azi	TVD	N/S	E/W (usft)	
(usft)	(°)	(°)	(usft)	(usft)		
2,694.00	2,20	78.10	2,693.29	12.54	53.37	

2.3.2 Survey Stations

Date	Туре	MD	Inc	Azi	TVD	N/S	E/W	V. Sec	DLeg	Build	Turn	TFace
		(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft	(°/100usft	(°/100usft	(°)
	<u> </u>)))	• •
9/25/2011		2,694.00	2.20	78.10	2,693.29	12.54	53.37	12.54	0.00	0.00	0.00	0.00
9/30/2011	NORMAL	2,774.00	1.80	62.20	2,773.25	13.44	55.98	13.44	0.85	-0.50	-19.88	-133,56
	NORMAL	2,868.00	2.70	44.10	2,867.17	15.72	58.83	15.72	1.21	0.96	-19.26	-47.57
	NORMAL	2,964.00	2.70	34.10	2,963.07	19.21	61.67	19.21	0.49	0.00	-10.42	-94.99
	NORMAL	3,060.00	2.50	39.30	3.058.97	22.71	64.26	22.71	0.32	-0.21	5.42	132.87
	NORMAL	3,155.00	2.90	311.30	3,153,90	25.90	63.77	25.90	3.96	0.42	-92.63	-129.58
	NORMAL	3,256.00	2.50	305.90	3.254.79	28.87	60.06	28.87	0.47	-0.40	-5.35	-150.22
10/1/2011	NORMAL	3,357.00			3,355,66	31.98	56.23	31.98	28.33	-28,33	0.00	180,00
	NORMAL	3,727.00	2.20	245.30	3.725.26	29.34	40.10	29.34	0.59	-0.42	-9.79	-140.35
	NORMAL	3,823.00	2.40	239.10	3,821,18	27.54	36.71	27.54	0.33	0.21	-6.46	-54.33
	NORMAL	3,918.00	2.00	241.70	3,916,11	25.73	33.54	25.73	0.43	-0.42	2.74	167,29
	NORMAL	4,014.00	1.90	234.80	4,012.06	24.02	30.76	24.02	0.27	-0.10	-7.19	-116.49
	NORMAL	4,110.00	1.90	233.40	4,108,01	22.15	28,19	22.15	0.05	0.00	-1.46	-90.70
	NORMAL	4,205.00	2.30	236.80	4.202.94	20.17	25.33	20.17	0.44	0.42	3.58	19,00
	NORMAL	4,300.00	2.20	231.50	4,297.87	17.99	22.30	17.99	0.24	-0.11	-5.58	-118.30
	NORMAL	4,396.00	1.90	214.80	4,393,81	15.54	19.95	15.54	0.69	-0.31	-17.40	-124.85
	NORMAL	4,491.00	1.60	198.40	4,488.76	12.99	18.64	12.99	0,61	-0.32	-17.26	-128.94
	NORMAL	4,586.00	1.70	192.50	4.583.72	10.35	17.91	10,35	0.21	0.11	-6.21	-62.49
	NORMAL	4,681.00	1.80	177.00	4,678.68	7.49	17.69	7.49	0.51	0.11	-16.32	-85.89
	NORMAL	4,776.00	1.90	167.60	4,773.63	4.46	18.10	4.46	0.34	0.11	-9.89	-76.50
	NORMAL	4,872.00	1.70	173.90	4,869.58	1.49	18.59	1.49	0.29	-0.21	6.56	138.42
	NORMAL	4,958.00	2.00	167.40	4,955.54	-1.25	19.06	-1 .25	0.43	0.35	-7.56	-38.25
	NORMAL	5,063.00	1.90	165,80	5,060,48	-4.72	19.88	-4.72	0,11	-0.10	-1.52	-152,23
	NORMAL	5,158.00	2.20	156.10	5,155.42	-7.92	21.01	-7.92	0.48	0.32	-10.21	-54.07
	NORMAL	5,253.00	2.10	150.20	5,250.35	-11.09	22.61	-11.09	0.26	-0.11	-6.21	-117.24
	NORMAL	5,349.00	1.60	154.40	5,346.30	-13.83	24.07	-13.83	0.54	-0.52	4.38	166.92
	NORMAL	5,444.00	1.60	160.20	5,441.26	-16.27	25.09	-16.27	0.17	0.00	6.11	92.90
	NORMAL	5,539.00	1.80	154.70	5,536.22	-18.87	26.18	-18.87	0.27	0,21	-5.79	-41.98
	NORMAL	5,635.00	1.80	154.30	5,632.17	-21.59	27.47	-21.59	0.01	0.00	-0.42	-90.20
	NORMAL	5,731.00	1.60	156.60	5,728.13	-24.18	28.66	-24.18	0.22	-0.21	2,40	162.31
	NORMAL	5,826.00	1.50	152.50	5,823,10	-26.50	29.76	-26.50	0.16	-0.11	-4.32	-134.08
	NORMAL	5,922.00	1.10	152.00	5,919.07	-28.43	30.77	-28.43	0.42	-0.42	-0.52	-178.63
	NORMAL	6,017.00	1.20	160.60	6,014.05	-30,17	31.53	-30.17	0.21	0.11	9.05	64,26
	NORMAL	6,112.00	0.70	162.30	6,109.04	-31.66	32.04	-31.66	0.53	-0.53	1.79	177.62
	NORMAL	6,208.00	0.90	143.70	6,205.03	-32.83	32.66	-32.83	0.34	0.21	-19.38	-61,94
	NORMAL	6,302.00	0.90	164.60	6,299.02	-34.13	33.30	-34.13	0.35	0.00	22.23	100.45

2.3.2 Survey Stations (Continued)

Date	Туре	MD (usft)	inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec	DLeg	Build	Turn	TFace
		,,	` '	`'	(03.0)	(usit)	(usit)	(usft)	(°/100usft	(°/100 usft	(°/100usft	(°)
10/1/2011	NORMAL	6,397.00	1.00	161.50	6,394,01	-35.64	33.76	-35.64	0.12	0.11	-3,26	-28.76
	NORMAL	6,778.00	1.30	165.40	6,774.93	-42.98	35.90	-42.98	0.08	0.08	1.02	16.58
10/1/2011	NORMAL	3,345.00	3.40	311.10	3,343.67	31.75	56.50	31.75	1.05	1.01	5.84	19.17
10/1/2011	NORMAL	3,441.00	3.20	268.50	3,439.62	31.92	53.89	31.92	3.81	3.81	0.00	268.50
10/1/2011	NORMAL	3,537.00	3.20	263.50	3,535.47	31.55	48.55	31.55	0.29	0.00	-5.21	-92.50
10/1/2011	NORMAL	3,632.00	2.60	254.60	3,630.34	30,67	43.84	30.67	0.79	-0.63	-9.37	-147,50
10/2/2011	NORMAL	7,351.00	1.00	163.40	7,347.79	-55.37	38.88	-55.37	0.33	-0.32	-4.63	-165.79
10/2/2011	NORMAL	7,256.00	1.30	167.80	7,252.81	-53.52	38.41	-53.52	0.01	0.00	0.50	91.20
	NORMAL	7,447.00	1.50	163.40	7,443.76	-57.38	39,48	-57.38	0.52	0.52	0.00	0.00
	NORMAL	7,542.00	1.10	168.00	7,538.74	-59.46	40.02	-59.46	0.43	-0.42	4.84	167.67
	NORMAL	7,638.00	1.10	157.90	7,634.72	-61.22	40,56	-61.22	0.20	0.00	-10,52	-95.05
	NORMAL	7,733.00	1.10	163.80	7,729.70	-62,94	41.16	-62.94	0.12		6.21	92.95
	NORMAL	7,829.00	1.00	157.10	7,825.69	-64.59	41,74	-64.59	0,16	-0.10	-6.98	-132.48
10/3/2011	NORMAL	7,924.00	1.00	163.00	7,920.67	-66.15	42.31	-66.15	0.11	0.00	6.21	92.95
	NORMAL	8,019.00	1.20	160.70	8,015.66	-67.88	42.88	-67.88	0.22	0.21	-2.42	-13.60
	NORMAL	8,114.00	1.10	157.80	8,110.64	-69,66	43,55	-69.66	0.12	-0.11	-3.05	-151.24
	NORMAL	8,210.00	1.30	157.20	8,206.62	-71.52	44.32	-71.52	0.21	0.21	-0.63	-3.89
	NORMAL	8,306.00	1.30	164.00	8,302.59	-73,57	45.04	-73.57	0.16	0.00	7.08	93.40
	NORMAL	8,496.00	1.30	161.30	8,492.54	-77.69	46.33	-77.69	0.03	0.00	-1.42	-91.35
10/4/2011	NORMAL	8,783.00	1.40	166.00	8,779.46	-84.17	48.22	-84.17	0.05	0.03	1,64	50.28
	NORMAL	9,261.00	1.20	162.30	9,257.34	-94,61	51,15	-94.61	0.05	-0.04	-0.77	-159.07
10/11/2011	NORMAL	11,536.00	1.20	162.30	11,531.84	-139.99	65.64	-139.99	0.00	0.00	0.00	0.00